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Theme 1: Number Sense and Operations

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Theme

Number Sense and Operations

Unit 1 Place Value

Digit, Numeral and Number

Learning Objectives:

By the end of this lesson, the student will be able to:

- Explain the difference between Digit, Numeral and Number.
- Discuss how the place value of a number can change.

Many Ways to Write

Learning Objectives:

By the and of this lesson, the student will be able to:

Write the Numerical Form in Standard Form Word Form and Expanded Form.



Lesson 9

Descending and **Ascending Numbers**

Learning Objectives:

By the end of this lesson, the student will be able to:

- Arrange the numbers in different formats.
- Describe strategies for arranging numbers in different formats.



Really Big Numbers!

Learning Objectives:

By the end of this lesson, the student will be able to:

- Recognize all place values of integers up to one billions,
- Explain how the value of a number changes based on its place within the number.

Lesson

Composing and Decomposing

Learning Objectives:

By the end of this lesson, the student will be able to:

 Compose and decompose numerals into multiple formats.



Predicting the Unpredictable

Learning Objectives:

By the end of this lesson, the student will be able to:

- Explains Front-end Estimation Strategy.
- Uses Front-end Estimation Strategy to round large numbers

Changing Values Learning Objectives:

By the end of this lesson, the student will be able to:

- Explain how the value of a digit changes when it moves to the left in the integer.
- Describe the patterns he noticed when values change.

Lesson

Comparing Really **Big Numbers**

Learning Objectives:

By the end of this lesson, the student will be able to:

- Use place value to compare large numerical formulas.
- Use symbols to express numerical comparisons.

Rounding Rules

Learning Objectives:

By the end of this lesson, the student will be able to:

- Apply different strategies for rounding numbers.
- Discuss which estimation is more accurate, the Front-end or Rounding Estimation.

Comparing Values

Learning Objectives:

By the end of this lesson, the student will be able to:

- Explain the relationship between the place value of a certain number and the place value of another number to the left of it.
- Use multiplication to compare place values.

Comparing Numbers in Multiple Forms

Learning Objectives:

By the end of this lesson, the student will be able to:

- Compare numbers in different forms.
- Describe strategies for comparing numbers in different







Concept 1.1 Reinforcing Place Value

Lesson 1

Digit, Numeral and Number

Digit

It is a single symbol used to make numerals. Digits are limited, starting from the digit 0 and ending with the digit 9 (Ten digits: 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9).

Number

It is an amount related to the numeral and consists of one or more digits. The numbers are unlimited and endless.

Numeral

It is a symbol or name that stands for a number.
Examples: 3, 49 and twelve are all numerals.

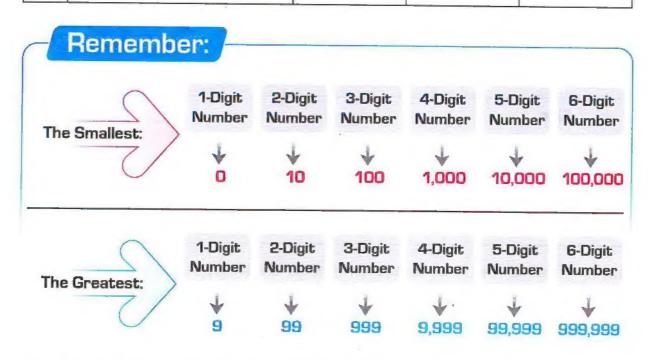
• The following table shows examples of Digits, Numbers and Numerals:

	Digit	Number	Numeral
7	1	1	1
25		1	1
Five			1
3	1	1	1
256		1	1
Seventy three			1

- So.
- The number is an idea, the numeral is how we write it.
- All digits are numbers (a 1-digit-number), not all numbers are digits.
- All digits and numbers can be called numerals.

1 Write each number in the appropriate column. (Some numbers may belong to more than one column).

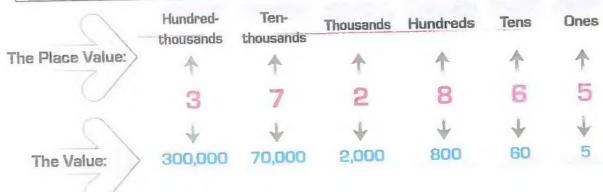
		Digit	Number	Numeral
a	369	***************************************	******************************	**************************************
0	24	TVIENTERE OF DAILY WAR HAND THE BEST OF RAD THE PARTY OF	\$	+0111111111111111111111111111111111111
0	9	***************************************	1+	******************************
0	Forty six			***************************************
е	2,000	BE ED 医普萨耳森森 未加水水水 中联合型医心体医设置运动冷水水中 加度中华		4 0 2 2 4 5 5 7 7 6 7 6 6 6 7 5 6 6 6 7 5 6 6 6 7 6 6 7 7 7 7
0	6,330,265	Bessesses and the state of the	***************************************	*14111111111111111111111111111111111111
9	Eight			***************************************
0	7	4 00 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		######################################
0	88			\
0	0		***************************************	***************************************
R	Three hundred seventeen	***************************************		******************************
0	Ninety	www.wa.wa.p.p.p.p.p.p.p.p.p.p.p.p.p.p.p.	医牙脂质 医含金色液体合金电子 医中枢性医动脉体动物 医中央性原因	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$



The Place Value

In the following number: 372,865

	Thousands			Ones	
Hundreds	Tens	Ones	Hundreds	Tens	Ones
3	7	2	8	6	5



- Write the greatest and the smallest numbers that can be formed from the digits (5, 7, 9, 0 and 4).
 - The greatest number:
 - The smallest number:
- 3 Write the Place value of the digit (4) in each of the following:
- - © 12,0<u>4</u>5:.....
- ② 25,124:

4 Circle the appropriate symbol to compare the numbers:

	First Number	Compa	rison S	ymbol	Second Number
a	54,336	<	=	>	45,336
0	900,900	<	=	>	99,000
0	56,002	<	=	>	50,602
0	4,500	<	=	>	4,500



Really Big Numbers!

We Previously know that:

- The largest 6-digit-number is 999,999.
- It is read as: Nine hundred ninety-nine thousand, nine hundred ninety-nine.
- We can find the number that comes just after it by adding the number "1", as follows:

	Nun	nerical per	iod	Nun	nerical per	iod
Millions	1	housands	-		Ones	
	Hundreds	Tens	Ones	Hundreds	Tens	Ones
	9	9	9	9	9	9
						1
1	0	0	0	0	0	0

- The resulting number is 1,000,000 and is read as "One million".
- So, We know that there is a numerical period called Millions, followed by another numerical period called Billions, as follows:

Numerical period	merical period Numerical period Numerical period				Numerio	al pe	riod		
Billions (Milliards)	Millions		s (Milliards) Millions Thousands		5	Or	nes	_	
Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones

ample (1):

Use the following Place Value table to read the shown number:

Billions (Milliards)	Millions		Thou	sands		Ones			
Ones	Hundreds	Tens	ns Ones	Hundreds	ndreds Tens		Hundreds	Tens	Ones
		3	5	8	9	1	4	5	5
	35 M	illion	S	891 Th	ousar	nds	4.	55	

- The previous number is read from left to right so that each number is followed by the name of the period:

Thirty-five million, eight hundred ninety-one thousand, four hundred fifty-five.

ample (2):

Use the following Place Value table to read the shown number:

Billions (Milliards)	ons (Milliards) Mill		ards) Millions			Thousands			Ones		
Ones	Hundreds	Tens	Ones	s Hundreds	Tens	Ones	Hundreds	Tens	Ones		
	8	1	5	5	2	0	0	2	1		
	815 M	1illior	ıs	520 Th	ousai	nds	2	21			

- The previous number is read as: Eight hundred fifteen million, five hundred twenty thousand, twenty one.

ample (3):

Use the following Place Value table to read the shown number:

Billions (Milliards)	Millions		Thou	sands	;	Ones			
Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
3	9	.9	0	7	0	2	5	7	1
3 Billions	990 N	lillion	15	702 Th	ousar	nds	5	71	

- The previous number is read as:

Three billion, nine hundred ninety million, seven hundred and two thousand, five hundred seventy-one.

1 Use the following Place Value table to read the shown number:

а	Billions (Milliards)	Millions			Thousands			Ones		
	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
			2	7	2	5	4	9	8	5
	* * ********* ** *** *** **	**************			414	*** *****			*******	******

_	The	previous	number	is	read	as:
---	-----	----------	--------	----	------	-----

0	Billions (Milliards)	Millions			Thousands			Ones		
	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
	1	3	9	0	4	0	2	6	5	0
	*** **********************************				**********			+04 dara mangong		*** -

 The previous number 	is read as:	

2 Write the following numbers: (In Standard Form):

- **a** 45 Millions + 120 Thousands + 123 =
- **6** 259 Millions + 24 Thousands =
- © 275 Millions + 299 = _____
- **1** 9 Billions + 109 Millions + 56 Thousands + 2 =
- **a** 3 Billions + 215 Thousands + 28 =

- **a** 9,445,325 = Millions + Thousands +
- **6** 925,023,007 = Millions + Thousands + Thousands +



- ② 24,000,305 = Millions + Thousands +
- 6,025,007,000 = _____ Billions + ____ Millions

+ Thousands +

** 8,029,000,028 = ____ Billions + ____ Millions

In each of the following numbers, find the Place Value of the digit 7:

- 1 In the number 35,785,692, the digit 7 is in the place.
- In the number 2,522,573, the digit 7 is in the. place.
- In the number 7,325,864 125, the digit 7 is in the place.
- In the number 125,000,347, the digit 7 is in the place.
- 1 In the number 27,000,210, the digit 7 is in the place.
- 1 In the number 2,700,200,300, the digit 7 is in the ... place.

Underline the digit in the Ten-millions place:

2,587,924,388.

3 25,348,975.

962,525,252.

Underline the digit in the Thousands place:

@ 345,823,622.

(a) 9,909,909.

353,332.



Changing Values

Remember:

When Multiplying by 10:

- We can simply add "0" to the number to find the product:

 $3 \times 10 = 30$

 $12 \times 10 = 120$

 $30 \times 10 = 300$

120 X 10 = 1.200

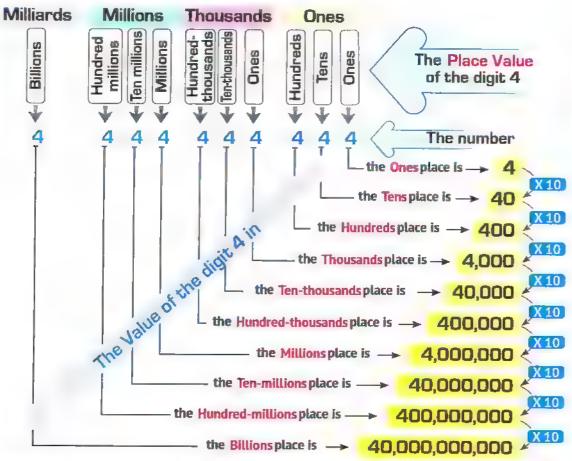
 $300 \times 10 = 3,000$

 $1,200 \times 10 = 12,000$

 $3,000 \times 10 = 30,000$

 $12,000 \times 10 = 120,000$

 The value of the number changes depending on where it is located, as in the following example:



We notice that, the value of the digit (4) increases by 10 times when it moves to the left



- 1 Ten = 10 Ones.
- 1 Hundred = 10 Tens.
- 1 Thousand = 10 Hundreds.
- 1 Ten-thousand 10 Thousands.
- 1 Million = 10 Hundred-thousands.
- 1 Ten-million = 10 Millions.
- 1 Hundred-millions = 10 Ten-millions.
- 1 Billions = 10 Hundred-millions.
- 1 Hundred-thousand = 10 Ten-thousands.

Billions (Milliards)	Millions	Thousands			
Ones	Hundreds Tens Ones	Hundreds Tens Ones	Hundreds Tens Ones		
)	(10 X 10 X 10)	(10 X10 X10 X	(10 X 10 X 10		

Find the and the Place Value of the underlined digit in the following:

	Number	Value	Place Value
a	252,987,65 4		40014384000444404440444444444444444
(5)	9,126,63 2,486		
(6)	1,917,371,394	b 1100 p 200 d	
Ó	2,790,004,521);;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	3224784787447470-00-00-00-00-00-00-00-00-00-00-00-00-0
(3)	7,698, 056,107		
a	9,126,632,509		

- The value of the digit 3 in the Hundreds place is ...
- The value of the digit 7 in the Ten-millions place is
- @ 50 Tens=
- @ 60 Ten-thousands=
- © 50 Hundreds = Tens
- 800 Hundreds= Thousands



Comparing Values

Notes

- 10 = 1 Tens.
- 100 = 1 Hundred = 10 Tens.
- 1,000 = 1 Thousand = 10 Hundreds = 100 Tens.
- 10,000 = 10 Thousands = 100 Hundreds = 1,000 Tens.
- 100,0000 = 100 Thousands = 1,000 Hundreds = 10,000 Tens.
- 1,000,000 = 1 Million = 1,000 Thousands = 10,000 Hundreds = 100,000 Tens.
- 10,000,000 = 10 Millions = 10,000 Thousands = 100,000 Hundreds = 1,000,000 Tens.
- 100,000,000 = 100 Millions = 100,000 Thousands = 1,000,000 Hundreds
 - = 10,000,000 Tens.
- 1,000,000,000 = 1 Billion = 1,000 Millions = 1,000,000 Thousands.
 - = 10,000,000 Hundreds = 100,000,000 Tens.

- **a** 50,000 = Hundreds.
- **6**,000,000 = Thousands.
- © 8,000 Millions = Billions.
- **1**,000 Thousands = _____ Hundreds.
- The place in which the digit 3 is located with a value equal to 10 times the digit 3 in the Ten-thousands place is _______.
- The value of the digit in the Thousands place is equal to

 times the digit in the Tens place.
- The value of the digit in the Millions place is equal totimes the digit in the Ten-thousands place.

Complete the following (as in the example):

(3 Hundreds, 5 Ones) X 100 = 305 № 100 = 30.50%

- (4 Tens, 3 Ones) X 10 =
- (2 Hundreds, 3 Tens) X 100 =
- (§ (5 Thousands, 6 Hundreds) X 1,000 =
- § (9 Ten-thousands, 8 Hundreds, 5 Ones) X 10 =
- 9 Hundreds X 1,000 = ______
- ② 25 Millions X 10 = ______

- The smallest 8-digit-number is ...
- Million is the smallest number formed from . digits.
- The largest 10-digit-number is
- The largest 7-different-digit-number is
- The number that is equal to 100 times the number 500 is
- The $\frac{1}{2}$ number formed from the digits 3, 7, 0, 0, ..., $\frac{1}{2}$, $\frac{1}{2}$ is
 - The number consisting of the digits 5, 9, 0, 5, 4, c, is
 - The wave a even number formed from 7 digits is .
 - The of the digit 6 in the number 24,687,922 is
 - The of the digit 4 in the number 892,546,317 is



Many Ways to Write

Standard Form:

It is a way of using digits to write a number.

(Ex. 35,254

• Expanded Form:

It is a way of using Place Value to write a number.

Ex. 30,000 + 5,000 + 200 + 50 + 4

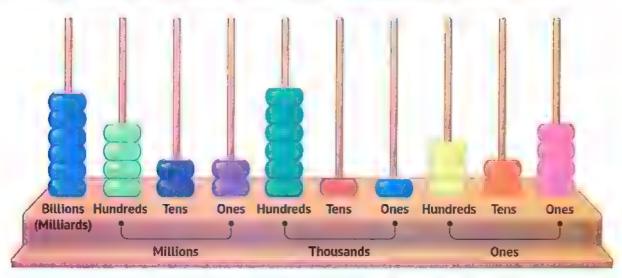
Word Form:

It is a way of using words to write a number.

Ex. Thirty-five thousand, two hundred fifty-four.

Example (1):

Write the number represented on the abacus in different forms:



- Standard Form: 6,422,611,324

- Expanded Form: 6,000,000,000 + 400,000,000 + 20,000,000 +

2,000,000 + 600,000 + 10,000 + 1,000 + 300 + 20 + 4

- Word Form : Six billion, four hundred twenty two million, six

hundred eleven thousand, three hundred twenty-four.



Use the following Place Value table to write the number in different forms:

Billions (Milliards)	Millions		Thou	Thousands			Ones		
Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
4	9	0	2	0	7	0	0	1	5
4 Billions	902 Millions			70 Thousands			15		

- Standard Form: 4,902,070,015

4,000,000,000 + 900,000,000 + 2,000,000 + 70,000 + 10 + 5

Four billion, nine hundred two million, seventy

thousand, fifteen.

Write the following numbers in the Word Form:

17,200,523:..

100,020,045:

© 20,000,000 + 100,000 + 400 + 50 + 9:

7,000,000,000 + 50,000 + 200:

2	Write	the	following	numbers	in	Standard	Form:
---	-------	-----	-----------	---------	----	----------	-------

- **©** 9,000,000,000 + 40,000,000 + 80,000 + 200 + 6 =
- **3** 7,000,000,000 + 500,000 + 200 =

3 Write the Expanded Form of the following numbers:

- **a** 40,300,102 = _____
- **6** 7,000,080,006 =
- Seven billion, fifty thousand, two hundred =
- One hundred fifty million, twenty-nine thousand, three hundred sixteen =

4 Complete the following table:

	Standard Form	Word Form	Expanded Form
a	203,500,200		
•	\$280020020970692°9726670622°52880722888	Five billion, four million, nineteen thousand, six hundred seventy-five	
0	14144 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		100,000,000 + 20,000,000 + 90,000 + 300 + 8

(Expanded Notation), by using the following

Place Value table:

Billions (Milliards)	Millions			Thou	sands	è	Ones		
Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
4	9	7	5	3	1	8	6	4	2

ANOUN S

- The digit 2 is in the Ones place and its value is 2 = (2 X 1) The digit 4 is in the Tens place and its value is $40 = (4 \times 10)$
- The digit 6 is in the Hundreds place and its value is 600 = (6 x 100) The digit is in the Thousands place and its value is \$.000 = (8 X 1,000) The digit is in the the thousands place and its value is 10,000 (1 X 10,000) The digit | is in the runared-thousands place and its value is 300,000 = (3 X 100,000) The digit is in the villions place and its value is 5,000,000 = (5 X 1,000,000) The digit \parallel is in the rememblions place and its value is 70,000,000 = (7 X 10,000,000) The digit is in the transfer in the transfer in the digit is 900,000,000 = (9 X 100,000,000) The digit I is in the Cours place and its value is 4.000,000,000 (4 X 1,000,000,000)

So, Composing Numbers: 4,975,318,642

The reproper more tions;

```
(4 X 1,000,000,000) + (9 X 100,000,000) + (7 X 10,000,000) +
(5 X 1,000,000) + (3 X 100,000) + (1 X 10,000) + (8 X 1,000) + (6 X 100)
(4 \times 10) + (2 \times 1)
```

1 Use the following Place Value table to compose and decompose the numbers:

a

Billions (Milliards)	Millions			Thousands			Ones		
Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
8	0	2	7	0	5	0	0	0	6

- 1. Composing the Number:
 - 2. Decomposing the Number (Expanded Notation):

0

Billions (Milliards)	Millions			Thousands			Ones		
Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
	Ptroncess = 40101	*****		å = ==================================	4114 4	*********			1++1+++++

- 1. Composing the Number:
 - Decomposing the Number (Expanded Notation):
 (6 X 1,000,000,000) + (9 X 100,000) + (2 X 10,000) + (5 X 100) + (9 x 10)

G

Billions (Milliards)	Millions		Thousands		Ones				
Ones	Hundreds Tens Ones		Hundreds Tens Ones		Ones	Hundreds Tens Ones			
	v w dw , an - g m a - a m p - a - p - a - p	**********	, GII GD-GD-HAA	在在在在外外的身份实产中 至日本日本	********	1717114144	### A #7+14+1+1A	**** *****	*****

- 1. Composing the Number: 20,014,023.
 - 2. Decomposing the Number (Expanded Notation):

2 Compose the following numbers:

=

_

=

Write the following numbers in Licean and an anom:

- 67 millions, 125 thousands, 12 =
- **1** 7,024,650:
- Seventy five million, thirty thousand, four hundred sixty:

Write the following numbers in the Expended Modelion:

- Six billion, nine hundred million, ten thousand, four.
- Eight million, seventy thousand, two hundred.
- 10,200,548.
- ② 2 million, 200 thousand, 57.

Concept 1.2 Using Place Value



Comparing Really Big Numbers

- To compare two numbers, do the following:

First: If the number of digits of each number is different

The number that has more digits is the largest



210,106

Six digits

81,016

Five digits

Second: If the number of digits of each number is equal

Compare the value of the digits of the two numbers from left to right:

xample:-

- **a** 245,568 < 567,984 **b** 78,620 > 76,902

 - the digit 5 is greater than the value of the digit 2.
- ⇒ Because the value of ⇒ Because the value of the digit 8 is greater than the value of the digit 6.
- \bigcirc 952,105 < 958,601
- Because the value of the digit 8 is greater than the value of the digit 2.

Choose the suitable symbol to compare:

	780,215,564	> = = <	770,215,564
(Log)	56,242,980	> • = • <	56,224,980
0	88,995	> @ = @ <	550,882
3	1,000,600	> = 0 <	235,450
(g)	7,000,546	> = <	7,000,546

2 Answer the following:

- Write a number in the Hundred-thousands place less than (<) 793,612.</p>
- (>) 289.
- 9 Write a number in the Billions place less than (<) 6,300,000.
- 6 Write a number in the Ten-thousands place greater than (>) 24,500.

Complete the following to make the comparison correct:

- 223,445 <</p>
- > 200,908 >
- © 75,205,512 > _____ > 70,258,456.
- 7,000,000,000 <</p>
 8,000,000,000.
- © ____< 210,884,560.



Comparing Numbers in Multiple Forms

The same comparison strategies mentioned in the previous lesson are applied. Also, different forms can be converted to the Standard Form to facilitate the comparison process.

cample: Compare using (<, = or >):

325,050,240

Three hundred twenty five million, fifty thousand, two hundred forty



325,500,240

300,000,000 + 20,000,000 + 5,000,000 + 500,000 + 200 + 40

1 Complete the following table using (< , = or >):

	Three hundred twenty five		300,000 + 20,000 + 5,000 +
a	thousand, fourteen		10 + 4
0	20,900,852	+ 844488 484877 7	19,899,510
0	(9 X 1,000,000) + (3 X 10,000) + (9 X 1,000) +		90,000,000 + 30,000 + 9,000 + 800 + 70
0	2,000,500,250	ma did did il bibli dibid dibid d	Two billion, five hundred million, two hundred fifty thousand
0	Nine billion	widelineers	(9 X 100,000,000) + (9 X 10,000,000) + (9 X 1,000,000)

Complete with a numeral in Standard Form:
7,225,547 <
12,125,250 > . . .
Complete with a numeral in Expanded Form:
100,258,963 <
20,300,520 >
Complete with a numeral in Expanded Notation:
② 20,000 <
(5) 7,000,000 >
Complete with a numeral in Word Form:

⁵ 2,200,200 >



Descending and Ascending Numbers

- 111 2 Magle

It is the order of numbers from the least to the greatest.

Descending Order

It is the order of numbers from the greatest to the least.

kample: For arranging the following numbers:

351,724 , 315,742 , 351,472 , 315,247

We compare each digit in the numbers from left to right.

*3*51,724 , *3*15,742 , *3*51,472 , *3*15,247

If the first digits from the left are equal, we compare the next digits until we reach the different digits.

51,724, 315,742, 351,472, 315,247

So, The ascending order: 315,247 , 315,742 , 351,471 , 351,724.

The descending order : 351,724 , 351,471 , 315,742 , 315,247.

Arrange the following numbers in a descending order:

- § 520,000 , 205,000 , 502,000 , 250,000. The order:...
- ③ 364,250 , 643,205 , 346,205 , 436,250. The order:...,

Arrange the following numbers in an ascending order:

- 999,999 , 9,000,000 , 100,000 , 900,900. The order :
- (a) 78,090 , 79,010 , 78,091 , 79,100 , 78,999. The order:

Arrange the following numbers in an ascending order (Numbers can be written using the Standard Form);

The order	Number	Standard Form
5	Three billion, ten million, two thousand, fifty.	
,	Three billion, one hundred million, twenty thousand, five.	
C	Three billion, one million, two hundred thousand, five hundred.	
5	Three billion, one hundred million, two hundred thousand, one hundred.	
è	Three billion, one million, two thousand, five.	

Arrange the following numbers in a descending order (Numbers can be written using the Standard Form):

The order	Number	Standard Form		
a	Four billion, sixty thousand, seven.			
б	(4 X 1,000,000,000) + (6 X 100,000) + (7X10).			
	4,000,000,000 + 600,000 + 700.	a de ada esta e e ese a esta esta esta esta est		
6	4,000,006,700.	A A A A A A A A A A A A A A A A A A A		
(e)	Four billion, six thousand, seventy.	100000111111111111111111111111111111111		





Frank-Ling Um Unpredictable

Front-end Estimation Strategy:

To estimate a number, we replace all digits of the number with Except for the first number on the left, it remains the me without any increase or decrease.

Front-end Estimation Strategy:

Number	Estimation
89,450	80,000
741,280	700,000
447,621,987	400,000,000

Number	Estimation
2,789	2,000
67,875,512	60,000,000
7,224,125,936	7,000,000,000

Complete the following table:

Number	Front-end Estimation
② 45,231,546	
Three billion, five hundred sixty million, nine hundred seven thousand, fifty five.	
7,000,000,000 + 400,000,000 + 200,000 + 90	
③ (3 X 1,000,000) + (2 X 10,000) + (7 X 100) + (9 X 10)	
(a) 14 million, 258 thousand, 635	



Rounding)

It is replacing a number with a simpler number that is close to the original number.

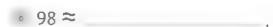
The Symbol (\approx) is called "approximately equal".

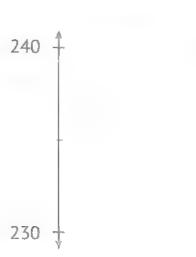
Rounding Rules

First: The Midpoint Strategy:	470 🕇
Example (1): Round the number 468 to the nearest ten:	468 -
From the number line, we notice that:	445
⇒ The number 468 is located between the numbers 460 and 470	465 +
⇒ And the midpoint between the two numbers is 465.	
So, the number 468 is closer to the number 470.	460
$468 \approx 470$ (to the nearest ten).	V
Example (2): Round the number 724 to the nearest hundred:	800 ‡
From the number line, we notice that:	
\Rightarrow The number 724 is located between the numbers 700 and 800.	
\Rightarrow And the midpoint between the two numbers is 750.	750 -
So, the number 724 is closer to the number 700.	724
724 ≈ 700 (to the nearest hundred).	
	700 ‡

When the number is in the middle, it is closer to the largest number.

Write down the midpoint of the number line. Then, locate each number on the number line. Round each number to the nearest ien:







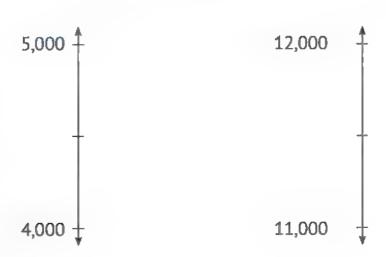
Write down the midpoint of the number line. Then, locate each number on the number line. Round each number to the nearest hundred:



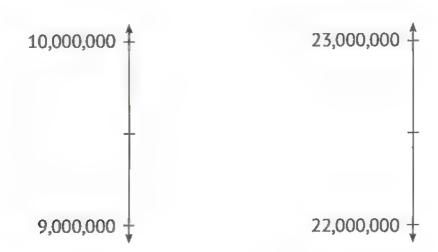


3 Write down the midpoint of the number line. Then, locate each number on the number line. Round each number to the nearest thousand:





Write down the midpoint of the number line. Then, locate each number on the number line. Round each number to the nearest million:



Second: The Place Value Strategy:

When rounding with a given Place Value:

We select the digit in the place to be rounded.

We replace the digits in the places that precede the previously selected digit with zeros.

We look at the digit in the place preceding the place to be rounded directly.

If the digit is 0, 1, 2, 3, or 4, the number of the specified place remains unchanged.

If the digit is 5, 6, 7, 8 or 9, we add (1) to the number of the specified place.

Round the following numbers to the nearest 10:

 $724 \approx 720$ (To the nearest 10).

 $4,386 \approx 4,390$ (To the nearest 10).

Round the following numbers to the nearest 1,000:

49,786 ≈ 50,000 (To the nearest 1,000).

73,465 ≈ 73,000 (To the nearest 1,000).

example (3): Round the following numbers to the nearest 1,000,000:

15170728 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ 15000000

 $15,170,728 \approx 15,000,000$ (To the nearest 1,000,000)

(b)	5	0	9	3	3	2	0	6
		J						
	- 5	1	0	0	0	-0	O	0

 $50,933,206 \approx 51,000,000$ (To the nearest 1,000,000)

1 Round the following numbers to the nearest 10:

- ⓐ 255 ≈
- **©** 73 ≈
- **②** 96 ≈
- € 12,257 ≈

2 Round the following numbers to the nearest 100:

- **©** 71,915 ≈
- **6** 999 ≈

3 Round the following numbers:

a 15,523 ≈

(To the nearest 1,000)

⑤ 86,165 ≈

(To the nearest 10,000)

© 987.625 ≈ _____

(To the nearest 100,000)

3 452,652,251 ≈

(To the nearest 1,000,000)

② 669,458,562 ≈

(To the nearest 10 thousand)

(To the nearest billion)

Find the result of each of the following, using the Front-end The Paralegy and the Rounding Rule Strategy.

Then, determine which of them is closer to the actual answer:

Question	Actual Answer	Front-end Estimation Strategy	Rounding Rule Strategy
(Ex. 32 + 46	32 + 46 = 78	30 + 40 = 70 ()	30 + 50 = 80 (✓)
a 12 + 58	+2 tylegana banda 24 tylegal 24 g propins	()	()
189 + 226	#874 # waryp ryp + 94 494 98 ban faul physogo	()	()
© 287 + 285	70 - make a state of the state	()	
3 ,348 + 2,563	503454544444444444444444444444444444444	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	()

Unit 2 Addition and Subtraction Strategies

Pesson. 1

Properties of Addition and Subtraction

Learning Objectives:

By the end of this lesson, the student will be able to:

- Determine the properties of the operations of addition and subtraction.
- Explain the properties of addition and subtraction.
- Search to determine whether the properties of addition apply to subtraction or not.



Mental Math Strategies

Learning Objectives:

By the end of this lesson, the student will be able to:

- Apply various Mental Math Strategies for addition and subtraction.
- Explain the importance of Mental Math Skills.



3

Addition With Regrouping

Learning Objectives:

By the end of this lesson, the student will be able to:

- Add multi-digit integers.
- Use estimation to determine whether his/her answers are reasonable or not.



Subtraction Strategies

Learning Objectives:

By the end of this lesson, the student will be able to:

- Use Decomposing Numbers
 Strategy to subtract whole numbers consisting of several digits.
- Explain the importance of identifying patterns and relationships in mathematics.



5

Subtraction With Regrouping

Learning Objectives:

By the end of this lesson, the student will be able to:

- Use place value to perform subtraction using Standard Algorithm.
- . Perform subtraction with renaming.
- Use estimation to check the reasonableness of their answers.



6

Bar Models, Variables and Story Problems

Learning Objectives:

By the end of this lesson, the student will be able to:

- Use symbols in equations to represent unknown values.
- , Use bar models to represent and solve word problems.
- . Determine the value of the variable in an equation.



Solving Multistep Story Problems with Addition and Subtraction

Learning Objectives:

By the end of this lesson, the student will be able to:

- . Solve multi-step word problems.
- . Explain how they solve multi-step word problems.





Using Addition and Subtraction Strategies

Properties of Addition and Subtraction

Properties of Addition

Neutral Element Property:

is the integer that can be added to any integer

without changing the result.

the sum of any whole number with the neutral element remains the same. The Aciditive Heural Element is ((Zero))

$$0 + 3,648 = 3,648$$

Commutative Property: الأسال

- The sum of two numbers and change by switching their order.

$$24 + 12 = 36$$
 and

So,
$$24 + 12 = 12 + 24$$

- If more than two numbers are added, we can add them in any order.

$$10 + 5 + 30 + 2$$
 $10 + 5 + 30 + 2$ $10 + 5 + 30 + 2$ $= (10 + 5) + 30 + 2$ $= 10 + (5 + 30) + 2$ $= 10 + 5 + (30 + 2)$ $= (15 + 30) + 2$ $= 10 + (35 + 5)$ $= (10 + 5) + 32$ $= 45 + 2$ $= 10 + 37$ $= 15 + 32$ $= 47$ $= 47$ $= 47$

$$10 \div 5 + 30 + 2 = 10 + (5 + 30) + 2 = 10 + 5 + (30 + 2)$$

1 Choose the correct answer:

"_____Property"

(Neutral Element or Commutative or Associative)

$$\bigcirc$$
 54 + 0 = 54

Property"

(Neutral Element) or Commutative or Associative)

.... Property"

(Neutral Element or Commutative) or Associative)

a
$$254 + 328 = 328 + 254$$

Property"

(Neutral Element or Commutative or Associative)

$$\bigcirc$$
 24,125 + 0 = 24,125

Property"

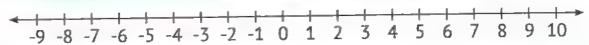
(Neutral Element or Commutative or Associative)

$$(120 + 147) + 250 = 147 + (250 + 120)$$

..... Property"

(Neutral Element or Commutative or Associative)

Negative Numbers: Look at the following number line:



There are numbers less than "Zero" that are called: Negative numbers.

(Ex. (-1) is read as Lnegative one, and it means a number less than zero by one.

(-6) is read as: negative six, and it means a number less than zero by six.

It will be studied in details later in higher grades.

Properties of Subtraction

Neutral Element Property:

- When we subtract: 5 0 = 5.
- When we subtract: 0 5 by using the number line, the difference is (-5).

So, 5 - 0 = 5 but $0 - 5 \neq 5$

Therefore, Neutral Element Property is not applicable in the subtraction process.

Commutative Property:

- When we subtract: 7 3 = 4.
- 3 7 by using the number line, the difference is (-4).

$$S_0, 7-3 \neq 3-7$$

Commutative Property is not applicable in the subtraction process.

Associative Property:

- When we subtract: 9 6 3.
- and the arrows using parentheses, as follows:

$$(9-6)-3=3-3=0$$
 or $9-(6-3)=9-3=6$.

$$9 - (6 - 3) = 9 - 3 = 6.$$

$$(9-6)-3 \neq 9-(6-3)$$

Associative Property is not applicable in the subtraction process.

Complete the following and write the Addition Property used:

3 Find the result of each, then circle the property(ies):

	Pro	blem	Property
a	13+20+15	20+15+13	Associative Commutative Neutral Element
0	0 + 214	214 + 0	Associative
-	219	214	Commutative Neutral Element
0	(10+40)+36	10 + (40 + 36)	Associative
461	86	86	Commutative Neutral Element
0	20 + 0 + 15	15 + 0 + 20	Associative
	39		Commutative Neutral Element



Mental Math Strategies

Front-end Estimation Strategy:

rece value in each number (the first number on Where only the practed to obtain an estimate of the answer. the left) is

$$452 + 23$$

$$400 + 20 = 420$$

$$600 - 20 = 580$$

The result may not be close to the actual answer.

This strategy is used if we want to get results that are somewhat close to the answer.

Rounding Strategy:

 Where previously studied Rounding Rules are applied to obtain a more accurate estimate of the answer.

$$500 + 20 = 520$$

$$600 - 30 = 570$$

The result ... De somewhat close to the actual answer.

This strategy is used if we want to get results closer to the actual answer.

Compensation Strategy:

 Where of the two numbers is replaced by a multiple of ten and the is a to keep the two numbers in balance.

(The nearest multiple of 10 to 29 is 30)

(We add 1 to 29 to be 30)

(We subtract 1 from 63 to be 62 to keep the balance)

So,
$$63 + 29 = 92$$

Noties

- In addition
- Subtract to compensate.
- In subtraction
- Add to compensate.

This strategy is used if we have a number close to the perfect Tens or the perfect Hundreds. Such as: 99, 58, 27, 289, 399, 158...

Mediti.

Composing and Decomposing Strategy:

 Where the number that is subtracted or added is decomposed into numbers that are easy to add or subtract mentally. (We can use the Expanded Form).

Examples: ⓐ
$$438 + 247$$
 (Decompose the number 247 to $200 + 40 + 7$) (Add the Hundreds)
$$= 638 + 40 + 7$$
 (Then add the Tens)
$$= 678 + 7 = 685$$
 (Then add the Ones)

This strategy is used to facilitate the solution of complex problems.

Counting up Strategy (from the smallest number to the largest number):

 Where the number is counted from the smallest number until we reach ा अ । विकास स्थानकार, and the result is the number of numbers that have been counted.

785 - 770 = 15

(We count after 770 until we reach 785)

So, we find that the result is 15.

90 - 86 = 4

(We count after 86 until we reach 90)

So, we find that the result is 4.

This strategy is used if the difference between the numbers is not so large that it is easy to count.

Use the none-end Estimation Strategy and Rounding Strategy to find:

Problem	Front-end Estimation Strategy	Rounding Strategy
26 + 45 '	45,000,000,000,000,000,000,000,000,000,0	######################################
42 – 58	######################################	187-1004946-01-0886/m-/***********************************
36 ÷ 223	***************************************	***************************************
427 – 125	4)-2)-20-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	
3,785 + 1,258	***************************************	***************************************

2 Use the Compensation Strategy to find the result (Show your steps):

а	9 + 45	6	28 + 73	0	399 + 245
	=		=		=
	=				=
	=		=		=
0	37 - 8	e	82 – 39	0	347 – 199
	=		=		=
	=		=		=
	=		=		=

3 Use the Composing and Decomposing Strategy to find the result (Show your steps):

a	163 + 27	D	245 + 317
	=		=
	=		=
	=		=
C	75 – 24	0	425 – 123
	=		=
	=		=
	=		=
	,		

Use and income Strategy to find the result:

Use the appropriate mental strategy to find the result (Show your steps). (Compensation or Composing and Decomposing or Counting up):

	Problem	Mental Math Strategy	Solution
(6)	49 + 64		
di	83 – 57		
(9)	800 – 793		
0	456 – 127		
(3)	845 – 236		
1	101 + 98		

Lesson (3)

Addition With Regrouping

Addition with Regrouping

- To add two numbers, we start by adding the Ones, then the Tens, then the Hundreds, and so on in order.
- Sometimes we need to rename (regroup).

Example: Add:

```
(a) 9,999,999 + 1 = 10,000,000

Horizontally

Vertically

+ 1

10,0000,000
```

4

Find the result of each of the following:

By the two numbers to the nearest 10:
$$4,530 + 3,830 = 8,360$$

By the two numbers to the nearest
$$100$$
: $4,500 + 3,800 = 8,300$

By the two numbers to the nearest
$$1\ 000:5,000 + 4,000 = 9,000$$

Looking at the outputs in each case, we find that the closest estimate to the actual output is to the nearest ten.

2 Complete the following table:

(Determine which of the estimates is closest to the actual solution)

Problem	To the Nearest 10	To the Nearest 100	To the Nearest 1,000
3 7,684	400400000000000000000000000000000000000		400000000000000000000000000000000000000
+ 6,418	# # # # # # # # # # # # # # # # # # #	*	+ ,
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(**************************************	\$4744444444444444444444444444444444444

Problem	To the Nearest 10	To the Nearest 100	To the Nearest 1,000
6 2,589	TOTAL MILET SE MILETON A		
+ 7,283	***************************************	THE THE REAL PROPERTY AND ALL OF	+
	()	A ADD-00-00-00-00-00-00-00-00-00-00-00-00-0	***************************************

3	An ant colony goes on a walk through the woods in search for food.
	On this journey, the ants form two bridges, the first bridge
	consists of 142 ants and the second bridge consists of 165 ants.
	What is the number of ants required for both bridges?
	Explain your steps, then check the reasonableness of your answer.
E	stimation (use one of the Rounding Rules):

- 44					
Δ	ctua	1 2	PR-011	4100	97.0
2	LLUG	L d	1151	WE	1

4 Ehab and Abeer travel from Aswan to Alexandria. They will travel 383 km on the first day to Assiut. On the second day, they will travel 462 km from Assiut to Alexandria.

How many kilometers will they travel in the two days?

Estimation (use one of the Rounding Rules):

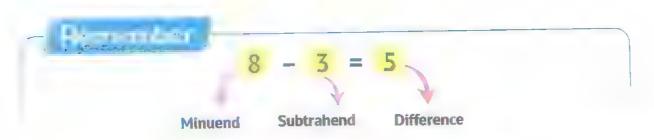
Actual answer:

The speed of the fighter plane reaches 2,420 km per hour. If this plane moves for two hours maintaining this speed, how far will it travel? Estimation (use one of the Rounding Rules):

Actual answer:



Subtraction Strategies



Count down Strategy with Decomposition of Numbers:

We use a number line as follows:

Draw a number line without markings (open number line) and write the minuend number at the right end of the line.

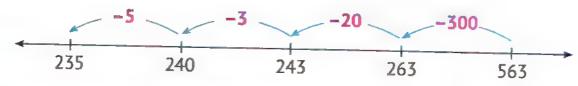
Decompose the sa krahend number into the ___anged Form,

Count down the minuend using the Expanded Form of the subtrainend.

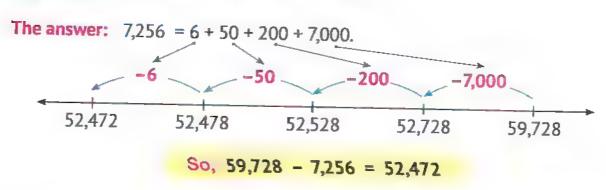
Subtract 563 - 328.

Answer:

And it can be solved in a simpler way by dividing the number 8 into (5 + 3) as follows:



Example 2: Subtract 59,728 – 7,256



Count-on Strategy with Decomposition of Numbers:

We use a number line as follows:

First Step

Draw a number line without markings (open number line) and write the subtrahend number at the left end of the line.

Second Step

Decompose the **minuend** number into **easy numbers** or use the **Expanded** Form.

Third Step

Count up from the **subtrahend** number to the **minuend** number while recording the jumps and new results.

Add the jumps together to find the difference.



Subtract 324 - 134

Answer:



$$100 \div 6 \div 60 \div 24 = 190.$$

$$324 - 134 = 190$$

Another answer:

$$6 + 60 + 100 + 20 + 4 = 190.$$

 The solution can be solved in more than one way by increasing or decreasing the number of hops.



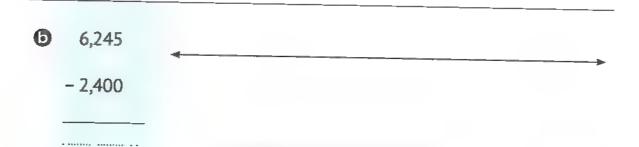
Subtract 43,456 - 23,258

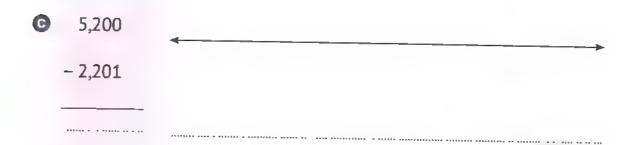
Answer:

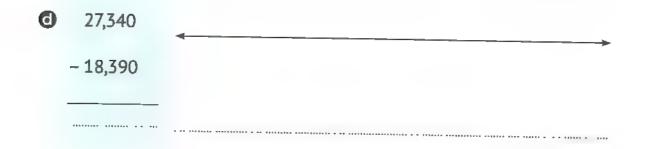
$$42 + 6,700 + 13,000 + 400 + 56 = 20,198.$$

1 Find the result of each of the following using the Count Down Strategy:









Solve the following problems using the Count-on Strategy:



8,425 - 4,362

5,200 - 2,301

16,452 - 8,250



Subtraction With Regrouping

(Standard Subtraction Algorithm)

- To illustrate the Standard Subtraction Algorithm, we use the given Place Value table.



Answer:

First-Step

We use the the Place Value table to represent the minuend only:

	Thousands			Ones	
Hundreds	Tens	Ones	Hundreds	Tens	Ones
	6	5	8	4	5

Second Step

We delete the subtrahend starting from the Ones place:

(And if what's inside the box isn't enough, we regroup by borrowing from the next box):

	Thousands			Ones	
Hundreds Tens Ones		Hundreds	Tens	Ones	
	6	5	8	4	5

 S_{0} , 65,845 - 37,428 = 28,417

- And the solution can be solved without the use of the Place Value table, using I was a few with Conaming horizontally or vertically.

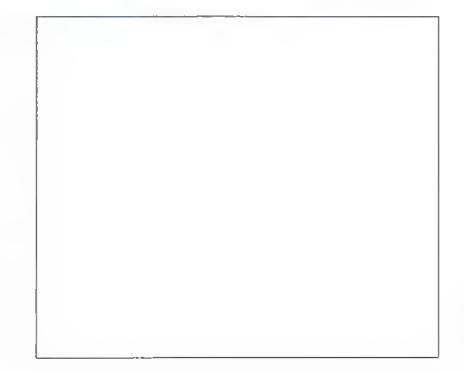
Use the last table to find the difference:

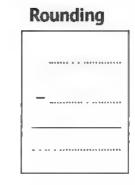
	Thousands			Ones	
Hundreds	Tens	Ones	Hundreds	Tens	Ones

	Thousands			Ones	
Hundreds	Tens	Ones	Hundreds	Tens	Ones

2	Subtract using one of the subtraction strategies, then round each
	number to the nearest 1,000 (Show your steps):

a	8,200
	- 6,058





O	70,234
	- 41,812
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,



		1

-	It takes 15,422,140 ants to carry an adult of 77 kg and about
	2,350,300 ants to carry a 10-year-old child on average 32 kg.
	How many ants are needed to carry an adult minus a
	10-year-old child?

- Round each number to the nearest million, then re-solve the question.

An ant colony contains 255,000 ants, and another colony contains 6.200 ants. What is the difference between the number of ants in the two colonies?

An ant wanted to cross a river that was 3,548 cm wide. The ant had already swam 1,672 cm.

What is the remaining distance that the ant should swim?

Two colonies of ants, the first colony had about 1,267 ants and the second colony had 3,452 ants.

How many more ants are there in the second colony than in the first colony?

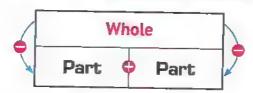
Concept 2.2 Solving Multistep Problems

Lesson (

Bar Models, Variables and Story Problems

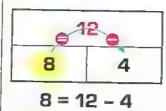
(Bar Model: (Part-Part-Whole))

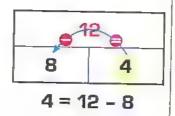
It is a diagram to represent the relationship between the whole and the part:



kample: —

From the following bar model, we conclude that:





The equation:

- It is a mathematical formula in which we symbolize the unknown number with one of the letters (such as: x, y, a, etc).
- It is called a variable because its value is not fixed and changes from one question to another.

$$4 + X = 9$$

(Ex.
$$4 + X = 9$$
 then: $X = 9 - 4$ \Rightarrow $X = 5$.

$$X + 2 = 10$$

$$X + 2 = 10$$
 then: $X = 10 - 2$ \Rightarrow $X = 8$.

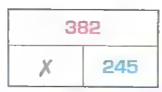
Solve the equation = find the value of the variable.



Find the missing number: 245 + _____.

(Create a Bar Model and an Equation)

Bar Model:



Equation: X = 382 - 245

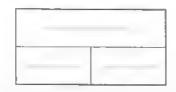
So, X = 137

Solution: 137

Read the following questions. Create a Ear mon for each problem and then find the solution.

Ahmed had Lau pounds, from which he bought a television set for 6,250 pounds. How much money is left with Ahmed?

Bar Model:

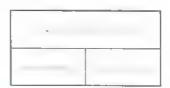


Equation:

Solution:

A primary school has 2 050 students. 985 of them are girls. How many boys are in this school?

Bar Model:

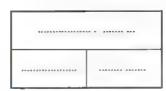


Equation: ...

Solution:

● A poultry farm with 4,200 chickens. 3,350 chickens were sold in a week. How many chickens are left on the farm?

Bar Model:

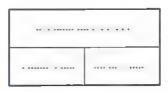


Equation:

Solution:

d Ahmed bought a car for **90,950** pounds and bought a house for his family for **750,500** pounds. How much money did Ahmed spend to buy the car and the house?

Bar Model:



Equation:

Solution:



Create a Bar Model to solve the following equation:

$$250 - X = 80$$

Bar Model:



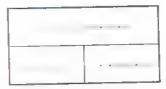
Solution: X = 250 - 80

$$X = 170.$$

Create a solve the following equations:

 \bigcirc 7,120 - \times = 5,200

Bar Model:



Solution: ...

 \bigcirc \forall - 22,120 = 18,850

Bar Model:



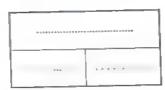
Solution:

Bar Model:



exchien:

Bar Model:



·6124107:



Solving Multistep Story Problems with Addition and Subtraction

Steps for solving word problems:

- Circle the important numbers and data.
- Underline the questions.
- Oraw a square around the solution keys.
- Check the information:
 - What is known?
- What is unknown?
- What is the hidden question?
- Use the knowns to answer the hidden question.
- 6 Use the new information to solve the problem and find the unknown.

Rample:

Alaa went to a clothing store and bought a shirt for 260 pounds and pants for 430 pounds and shoes for 330 pounds. If Alaa had 1,300 pounds, how much money is left with him?

Answer:

Alaa paid = 260 + 430 + 330

= 1,020 pounds.

The amount left with him

= 1,300 - 1,020

= 280 pounds.

The information:

- Purchases:
 - T-shirt for 260 LE.
 - Pants for 430 LE.
 - Shoes for 330 LE.
- Alaa had an amount of 1,300 LE.
- Unknown: The remaining amount with Alaa.
- Hidden question: What is the total money of what Alaa paid?

Or

What is the value of the purchases that Alaa bought altogether?

The length of the Nile River is about 6,853 km. Karim and his family travel across the Nile from a side to the other side. If they traveled the km in January, then 1,120 kilometers in February, and then 1,325 kilometers in March. How many kilometers are left to travel to get to the other side?

- //-	100	200	-	20		
A	ш	201	и	/6	ay.	0

The Great Pyramid had 59,000 visitors on Monday, 27,525 on Tuesday, and 32,975 on Wednesday. The number of visitors is expected to be 150,000 from Monday to Thursday. How many visitors have to attend on Thursday to reach that number?

Answer:

Mansoura has a population of 420,195 people. The population of Helwan is 5,20,600 people and the population of New Cairo is How much more is the population of Helwan and New Cairo combined than the population of Mansoura?

Answer:

Unit 3 concepts of Measurement



Ant Travel (Units of Length)

Learning Objectives:

By the end of this lesson, the student will be able to:

- . Explain the relationship between the metric units of length.
- Convert from one unit to another in metric units for measuring lengths. 🥻





The Weight Can Wait (Measuring Mass)

Learning Objectives:

By the end of this lesson, the student will be able to:

- Explain the relationship between metric units of mass
- Convert between metric units of mass.





Fill It Up (Volume/Capacity)

Learning Objectives:

By the end of this lesson, the student will be able to:

- Explain the relationship between metric units of capacity.
- Convert between metric units of capacity.





Measurement and Unit Conversions

Learning Objectives:

By the end of this lesson, the student will be able to:

- Know the relationships between place values and measurement transformations.
- Use multiplication and division to convert between units of measurement.



What Time Is It?

Learning Objectives: By the end of this lesson, the student will be able to:

- Read the time in minutes.
- Explain the relationships between units of time measurement.





How Long Does It Take?

Learning Objectives:

By the end of this lesson, the student will be able to:

- Explain the meaning of elapsed time.
- Solve elapsed time calculation problems.
- . Explain the strategies they use to solve elapsed time problems.



Scaled Measurement

Learning Objectives:

By the end of this lesson, the student will be able to:

- Draw a line plot graph to represent the given data.
- Select an appropriate key and scale for the line plot
- Write questions that can be answered using their line plot graph.



Measuring the World

Learning Objectives:

By the end of this lesson, the student will be able to:

- Use addition and subtraction to solve problems.
- Use multiplication and division to solve problems.
- Solve word problems related to measurement.
- Apply a variety of strategres to solve word problems.











Luesion (I) Lucis of Length)

Measurement systems)

There are many measurement systems that are used in different parts of the world.

	Units of Measurement					
Main Quantities	French System (Gaussian System) (C. G. S.)	British System (F. P. S.)	The Metric System (M. K. S.)			
Length	Centimeter	Foot	Meter			
Mass	Gram	Pound	Kilogram			
Time	Second	Second	Second			

In Egypt, we use the Merric System

Oper, Khogram, Second) in measurement.

Metric System of Measurement.

(Meter, Kilogram, Second)

This system depends on the following units as a basis for measurement:

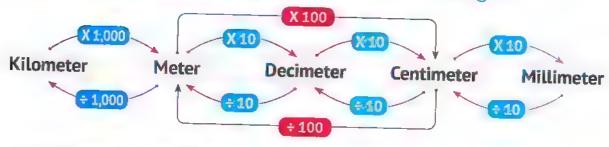
The is to measure length, the kilogram is to measure weight, the is to measure time, and the liter is to measure capacity.

The following table shows the metric units:

Main Quantities	1,000 Units	100 Units	10 Units	Unit	1 10 Unit	1 100 Unit	1 1,000 Unit
Length	Kilometer	Hectometer	Dekameteri	Meter	Decimeter	Centimeter	Millimeter
Mass	Kilogram	Hectogram	Dekagram	Gram	Decigram	Centigram	Milligram
Time	Kiloliter	Hectoliter	Dekaliter	Liter	Deciliter	Centiliter	Milliliter

Length Units

The relationship between units of length



From the above we find that:

1 Kilometer = 1,000 Meters.

1 meter = 10 decimeters • 1 meter = 100 centimeters • 1 meter = 1,000 millimeters

1 decimeter = 10 centimeters • 1 decimeter = 100 millimeters

1 centimeter = 10 millimeters

1 Choose the best unit for measuring each of the following:

Child's height.

(kilometer, meter, centimeter, millimeter)

The distance between your house and the club.

(kilometer, meter, centimeter, millimeter)

The length of an insect.

(kilometer, meter, centimeter, millimeter)

The distance between Cairo and Alexandria.

(kilometer, meter, centimeter, millimeter)

The height of a school,

(kilometer, meter, centimeter, millimeter)

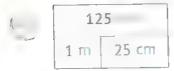
2 Complete each of the following:

Kilometer	Meter
5	He do name proposition of a reading part
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20	· · · · · · · · · · · · · · · · · · ·
by bibadeshimmiganggappi d	35 000

Meter	Centimeter
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9	
դարգամաստ մոր ը գի ը գործ ա ման աս մո հ	3 000
400	

	Meter	Decimeter
a) w	y = 中·西爾布·伯斯爾·普·奇·西·哈·奇·西·哈·奇·西·	90
	5	Andada was so co
7.5	· ** * # # # # # # # # # # # # # # # # #	700
	60	

Complete the Bar Models to convert lengths units, as in the example:





372







	7	0	0.0	0	m	
--	---	---	-----	---	---	--

15 km | 120 m

4 Complete each of the following:

6

5	If the length of one bee is about 1 cm, how long is a row of 100,000 bees?
	Row length = km.
6	Ahmed is 150 cm tall. How tall is Ahmed in decimeters and millimeters?
	150 cm = dm = mm.
7	Sameh practices walking. Usually, he walks 50 meters per minute.
	- How many minutes does Sameh need to walk 500 meters?
	- What is the distance that Sameh walks in half an hour?

Lesson 2

The Willer of Community (Meacuring Mass)

Mass Units

The relationship between the units of mass.



1 Kilogram = 1,000 Grams

Choose the pess mass unit for each of the following:

- The mass of a child.
- The mass of a ring.
- The mass of a pencil.
- The mass of a dog.

- (Kilograms, grams)
- (Kilograms, grams)
- (Kilograms, grams)
- (Kilograms, grams)

2 Complete each of the following:

Gram	Kilogram
2,000	日 医香油香 由 电水水水 电子混成 奇妙 b, 海 持分 n 即为为
	15
61,000	p y g y g m y s d tolete d-ggy s' la m de la Pell

Gram	Kilogram
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5,000	医非种种的 医加州奇奇奇奇 医皮肤 化二甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基
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3 Complete the Bar Models to convert between mass units:

60,030	grams
60 kg	30 gm



8,235 gm		
8 kg	235 gm	

9 kg 105 gm

0	电电阻 医甲基基酚 经收收帐 经金额	grams
	32 kg	8 gm

8,235 gm kg gm

0	41,623 grams				
	kg	gm			

4 Complete each of the following:

- a 6 kilograms = grams.
- ② 200 kilograms = grams.
- **9** 90,000 **grams** = _____ **kilograms**.
- ② 200,000 grams = kilograms.
- **9** 3,624 gm = ____ kg + ___ gm.
- **6** 67,026 gm = _____ kg + ____ gm.
- **9** 5 kg + 583 gm = gm. **6** 50 kg + 9 gm = gm
- 5 If Shaima's weight is 45 kilograms and 200 grams, rewrite the weight in grams.

Adam bought 5 kilograms and 500 grams of oranges. Then, he bought 7 kilograms of oranges. Rewrite these weights in grams, then find the total weight of what Adam bought.

(Marity)

Capacity Units

The relationship between the units of Capacity.



1 Liter = 1,000 Milliliters

1 Complete the following:

3	Liter	Milliliter
	50	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		200,000
	520,000	· 中央市出土中田町中日 中日 中日 中日 中田 日本 田田

)	Milliliter	Liter
		8
	7,000	
	44444444444444	18

Complete the Bar Models to convert the following volume units, as in the example:

20 L	8 ml
20	



7,302 n	nilliliter
71	302 ml

9)	44+44+444	mi
	35 1	20 ml

0	在企业企业企业中国的利用的	mt	
	9 L	252 ml	

9	3,022 ml	

@	200,200 ml		
		1	ηĺ

3 C	omplete each	of the follo	wing:		
a :	3 liters =	millilite	rs.		
()	0 liters =	millilit	ers.		
0	700,000 millilite	'S = ***********************************	liters		
-	5,000 milliliters				
	,320 milliliters =				
	0,008 milliliters				illiliters.
_	1 liters + 11 mil				
Q 1	0 liters + 2 milli	liters=	m	illiliters.	
4 Ti	ne <mark>c</mark> ar's fuel ta	nk is filled	with 45	liters of gase	oline. If the tank
	ntains 30 liters				
	low much gasoli			the tank?	
	45 liters =				
	30 liters, 250 mil				
- /	amount of gasoli	ne =		(uppupuunnang 140 d an m boddddwr rw 6504	***************************************
					nd one liter, 250
		le juice. Wi	hat is th	ne total amou	unt of juice that
	am has?				
	liters, 500 milli				
	liter, 250 millili				
	mount of juice =				
					nk 320 milliliters
		drank 250	millilite	rs. How muc	h sode water is
	in the bottle?	D M 1.1.			
- 0	se the following	Bar Model t	o solve:		,
		2	Liters	·	
	230	ml 2	50 ml	ml	
2	liters =	milliliter.			
– Aı	mount of soda w	ater =		计电容器 化硫化物物 化氯化 化氯化 化二甲基甲基 化二甲基甲基 化二甲基甲基 化二甲基甲基 化二甲基甲基	· 中午日 在 至至日 南北縣 医奇奇林 如如此个个个月 中午本 如今 电中介值器 点 子 任用表 克 孙子教 · 中 · · · · · · · · · · · · · · · · ·

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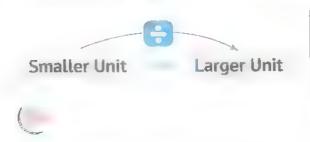
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The relationship between the units of measurement





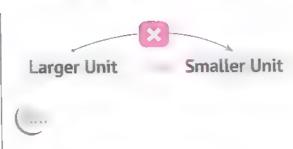
When converting from one unit to another, do the following:



$$200 \text{ cm} = 200 \div 100 = 2 \text{ m}.$$

$$4,000 \text{ gm} = 4,000 \div 1,000 = 4 \text{ kg}.$$

$$1,500 l = 1,500 \div 100 = 15 hectoliter.$$



$$5 l = 5 X 1,000 = 5,000 ml.$$

$$20 \text{ m} = 20 \text{ X} 10 = 200 \text{ dm}.$$

1	Complete	the	follo	vina:
			,	

(a) 3 m = ____ cm.

© 50 decigrams = _____ centigrams.

1,200 decigrams = ____ grams.

@ 2,000 ml = _____ deciliter.

42 hectoliters = _____ liters,

2 Complete the following:

(a) 2,000 cm = _____ decimeters = ____ meters.

1 4,000 gm = dekagrams = hectograms.

© 25 kiloliters = hectoliters = dekaliters.

7,000 dekameters = hectometers = kilometers.

(a) 12 decigrams = _____ milligrams.

5,000 deciliters = dekaliters.

The distance between Ahmed's house and school is 400 meters. What is the distance that Ahmed travels to reach school in centimeters?

- Company of the transfer of t

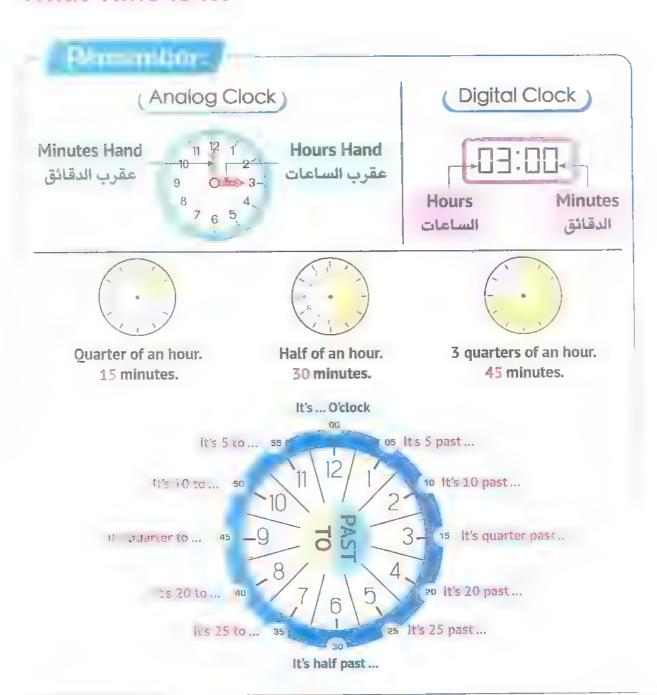
4 The person needs 4,000 ml of water per day. How many liters does a person need per day?



Evaluate Time and Scaled Measurement

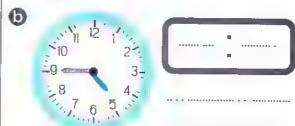
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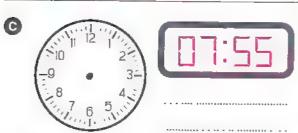
What Time Is It?

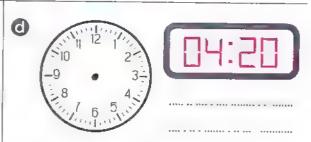


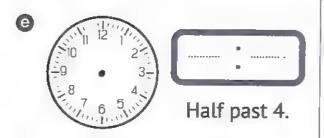
1 Complete the following:

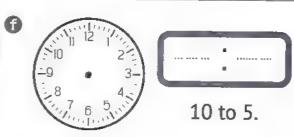


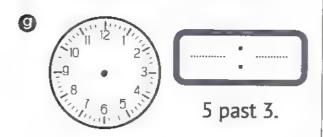


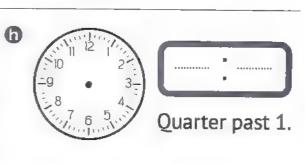


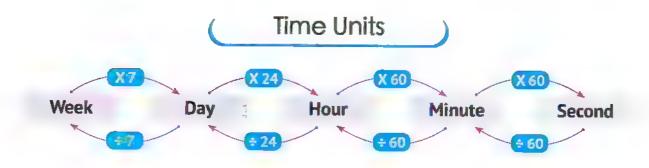












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Complete the following tables:



Week

1

3

5

7

9



Day



	4		
Day	Hour		
1	जा व के भी ज देवी कि की की कि का की की का व		
4			
6	PP-SIOP-SIP-SIPA A SA Bu &		
0			

	50
Hour	Minut

. 4				21
lour	r Minute		Minute	Second
1	and decired decire decire decire decire decire de		1	
2	#++44# ## 4+#44 # #+0+4 #		3	
5	*********		6	4 c 4 d d d m m 4 d m 4 d d d d d d d d d d
8	ं ते के की के कि के पूजा पह अपने के के के प्रकार के प्र		7	***************************************
10			9	

Solve the following conversion problems:

10

Complete the following:

(1 30 hours =	days +	hours.
(a 150 minutes =	hours +	minutes.
(f 330 minutes =	hours +	minutes.
	9 90 seconds =	minutes +	seconds.
(6 605 seconds =	minutes +	seconds.
5	Emad traveled with he spent 3 days in Lu How many hours did	ixor and 4 days	
G	Salah ewam in trainir	og for 2 hours o	on Thursday, 2 hours on
0	Friday and 4 hours or	_	in Thursday, 2 Hours on
	How many minutes d	id Salah spend	in Swimming training in the
	three days?		

How Long Does It Take?

Adding and Subtracting Time:

To add and subtract time. Look at the following examples:

We add: Minutes + Minutes

Hours + Hours

In this example, when adding the minutes, we get 25+55=80 minutes. This is not acceptable because number that can be written in the minutes field is 59 minutes. As 60 minutes is an hour.

: 80

So, we will regroup 60 minutes and add an hour to the total hours.

4 hours and 25 minutes + 3 hours and 55 minutes = 8 hours and 20 minutes.

Rample (2):

We Subtract: Minutes - Minutes

Hours - Hours

In this example, when subtracting 20-45, we get (-25) and this is not acceptable. So, we must follow

. We convert 1 hour from hours to 60 minutes, then the minutes become 80 minutes, then we can subtract.

rs Minutes

9 hours and 20 minutes - 5 hours and 45 minutes = 3 hours and 35 minutes.

a	Hours Minutes	•	Hours Minutes
	6 : 34		4 : 35
	+ 2 : 26		+ 3 : 35
0	Hours Minutes	d	Hours Minutes
	9 : 25		7 : 00
	- 2 : 43		- 2 : 27
	************		di traca
and	moud travels from Cai	If he starts	dria in a time of two hours
			hree movies. The first
movi	e is 1 hour 22 minutes	long, the se	cond movie is 2 hours 12
movi minu	e is 1 hour 22 minutes tes, and the third mov	long, the sevie is 1 hour 5	cond movie is 2 hours 12 7 minutes.
movi minu	e is 1 hour 22 minutes tes, and the third mov	long, the sevie is 1 hour 5	cond movie is 2 hours 12



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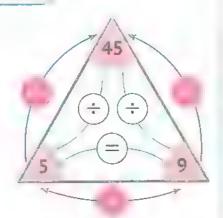


Remember:

Triangle of Division and Multiplication Facts:

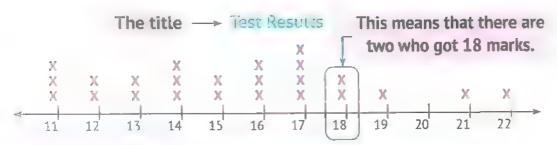
From the opposite triangle:

- $5 \times 9 = 45$
- $9 \times 5 = 45$
- 45 ÷ 9 = 5
- $45 \div 5 = 9$



(The Line Plot Graph:)

The following line plot graph shows the grades of a number of students:



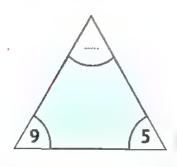
It shows us what the numbers on the line represent.

→ Students' Marks

X = 1 Student. ← The key

1 Complete the triangle of Division and Multiplication Facts:

a



____ × ___ × ___ = __ __

_____ × ___ = ____

·····

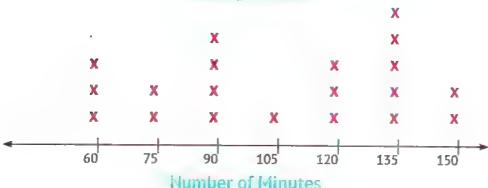
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.... × =

Training Minutes



X = 2 Students.

- The nitration time students spend in training is minutes.

- The most common time students spend in training is minutes.
 - The least common time students spend in training is minutes.
 - The number of students who spend

in training is

The number of students who spend

in training

(Gradient Scales)

We see gradient scales in Examples may include:





Watches



Rulers and metric sticks



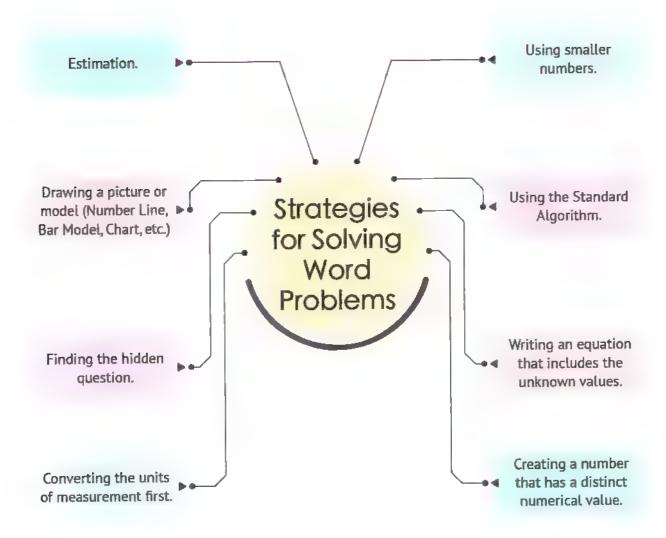
Weight scales and scales used to measure masses

Graduated cylinders





Measuring the World Around Me



Aya bought potatoes weighing 2 kg and 950 g. She bought
onions that weighed 1,075 grams less than the potatoes.
What is the weight of the potatoes and onions together?

- It takes 4.5 gays for a pharaonic ant to grow from the Egg Stage to become an adult ant. It takes 12 weeks for a wood ant to grow from the Egg Stage to become an adult.
 - Which species takes the longest to grow from the Egg Stage to an adult ant? What is the time difference between them?

- A fish tank has a capacity of 100 liters. 20,000 milliliters of water are poured into it.
 - How many liters of water should be used to fill the tank completely?

4	Zina bought 8 kilograms of sugar, 10 kilograms of flour, 500
	grams of cocoa, 225 grams of nuts, and 275 grams of coconut.
	What is the total mass of what Zina bought in kilograms?
_	Ahmed has a 12 meter long piece of wood. He wants to cut it
5	
	into 3 equal pieces in length.
	How long should each piece be in meters?
	What is the length of each piece in centimeters?
6	Ayman likes jogging. During training, Ayman needs to drink
	500 milliliters of water 4 times per day.
	How many liters of water will he drink in one week?
	110W many more or water to the same state of the
	• • • • • • • • • • • • • • • • • • • •

Ehab trains Weightlifting. His weight is Ehab wants his weight to If this continues for _____, what will his weight be in the end?



Unit 4 Area and Perimeter



Marching Ants (The Perimeter)

Learning Objectives:

By the end of this lesson, the student will be able to:

- Define the perimeter.
- Use the rectangle perimeter formula to calculate the perimeter of the rectangle.
- Explain how to calculate the perimeter.





Fill the Space (The Area)

Learning Objectives:

By the end of this lesson, the student will be able to:

- Define the area.
- Use the formula to calculate the areas of rectangles.
- Explain how to calculate the area.



Something Is Missing!

Learning Objectives:

By the end of this lesson, the student will be able to:

 Use formulas to calculate unknowns when determining some dimensions of rectangles.





Odd Shapes

Learning Objectives:

By the end of this lesson, the student will be able to:

- Calculate the area and perimeter of odd shapes.
- Explain the strategies for finding the area and perimeter of odd shapes.





Growing Dimensions

Learning Objectives:

By the end of this lesson, the student will be able to:

 Use the formulas of area and perimeter to solve comparison problems using multiplication.





Exploring Area and Perimeter

Lesson

Marichina data (This Printminter)



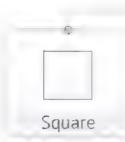


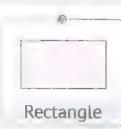
















The Regiangle

- · It is a quadrilateral with four sides and four angles.
- Each two opposite sides are and and .
- Each of its corners is a right angle (90 degrees).

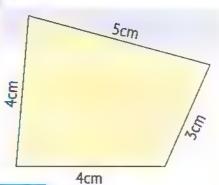


- · A type of rectangles.
- Its four sides are equal,



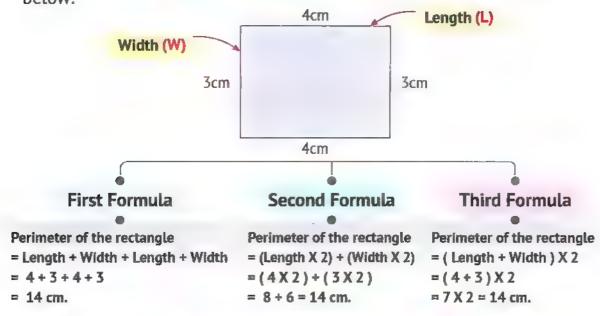
The Perimeter

- The perimeter of a figure is the sum of the lengths of its sides.
- Example: The perimeter of the opposite figure $= 5 + \frac{7}{3} + 4 + 4 = 16$ cm.



Perimeter of the Rectangle

 We can calculate the perimeter of the rectangle in one of the ways shown below:

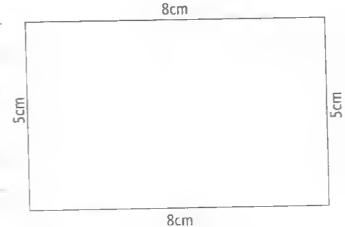


Perimeter of the Square

 We can calculate the perimeter 3cm Side of the square in one of the ways Side shown below. 3cm 3cm First Formula Second Formula 3cm Perimeter of the square Perimeter of the square = The sum of its sides lengths = Side length (L) X 4 = 3 + 3 + 3 + 3 = 12 cm. $= 3 \times 4 = 12 \text{ cm}.$

Use two different formulas to find the perimeter for each shape (show your steps):

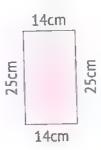
🧐 First Formula =



Second Formula =

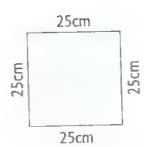
First Formula =

Second Formula =



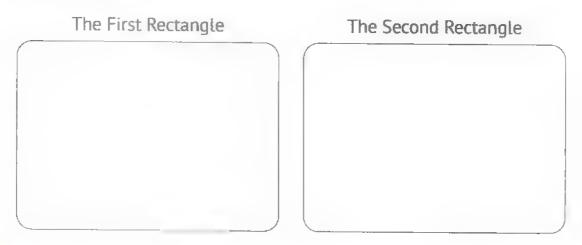
First Formula =

Second Formula =



	rectangle and write the length and width according to the proble
6	Tarek is making a frame for his rectangular picture, 45 cm long and 25 c
	wide. What is the perimeter of the frame?
	1 2 40 374 2 1143 444444 (44444444 (4444444444444444
	The state of the s
	The first transfer that we would not seen and the seed of the seed
	And when it was terfered that we would be hardered to the case that when the and the analysis and
	Her has proper or the range by droven before annealous modeled command throughout absorptions where
(2)	Omar is building a square fence around his garden. Each side is 8 meter
	long. What is the perimeter of the fence?
	tong. What is the perimeter of the fence?
	the the second library representation and the second secon
ech.	
9	Issam wants to put a wooden frame around a 2 m long and 1 m wide window
	What is the perimeter of the frame?
	· · · · · · · · · · · · · · · · · · ·
	TATION IS NO POLICIAN AND AND AND AND AND AND AND AND AND A
	The state of the s
	* D. Ph. St. College Control (1981) and (198

Maha walked in a path with a perimeter of 200 m. Draw two different rectangles that can represent her path: (Write the height and width on the drawing).



A square whose sides are 20 cm. Find its perimeter. Then draw a rectangle with the same perimeter.



Fill the Space (The Area)

Area

Shape area is the surface area of two-dimensional geometric shapes.
 Or is the number of square units that make up the shape.

Example: The area of the corresponding figure:

- The units that make up the corresponding figure are 15 square units.
- The area can be calculated in another way:
 - We have 3 rows and each row consists of 5 units.
 - Therefore, the area (number of units)
 - = 5 X 3 = 15 square units.

	+	5	Unit	:s —	
†	1	2	3	4	5
	6	7	8	9	10
1	11	12	13	14	15

Units of Measurement for Area:)

- Any unit of length (millimeter, centimeter, meter, kilometer) can be used.
 However, we always say the word square or write (the power of 2) to represent the amount of squares for a given unit which can be plotted in a grid on the figure.
- Square Centimeter (cm²): is the area of a square with side length of (1 cm).

- Square Meter (m2): is the area of a square with a side length of (1 m).

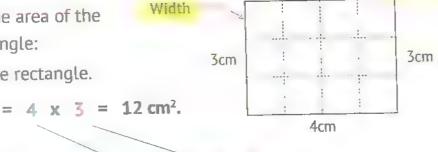
4cm

Length

The area of the Rectangle:

- To calculate the area of the opposite rectangle:

The area of the rectangle.



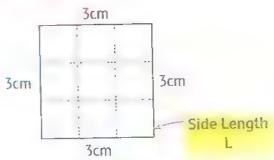
Formula:

- Area of the rectangle = Langur (L) x Width (W)

The area of the Square:

- To calculate the area of the opposite Square:

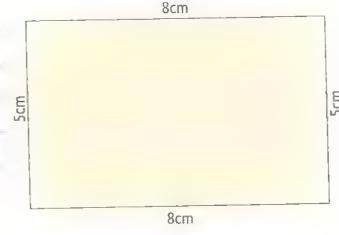
Area =
$$3 \times 3 = 9 \text{ cm}^2$$
.
A = (L) × (L)



Area of the square = the length of the side (L) x itself (L)

Calculate the area of the following rectangles (show your steps):

Area =



♣ Area =



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**** ***	200	20cr
ΠΟΠΑ Αφό, φήφ	20cr	n
	··· ·· ··	20cm

2 A dining table is 8 m long and 6 m wide. What is the area of the glass needed to cover the top of this table?

Area =	199.44		
	411.04	AN ARCHITECT COMP TO AN ARCHITECT TO A CONTROL OF THE ARCHITECT TO	

3 A square piece of paper with a side length of 9 cm. What is the area of this piece of paper?

Area =	TYP 29% SOM CAR CAN POST OFFICE OFFICE AND ACT TO SOME THE AMALOUS TO SOME TO SOME TO SOME TO SOME THE	电影动物 外电电 电电电 医电电子混乱 法人	i à bressano e ce die dal
		***************************************	,

4 A glass window is surrounded by a wooden frame consisting of two parts joined from the two short edges. Each part is in the form of a rectangle of 6 m length and 2 m width. Find:

The area of the glass and the perimeter of the wooden frame.
41114
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MARKETH AND DOOR OF THE RESIDENCE AND ADDRESS OF THE PROPERTY
THE TWEET STATES AND ADDRESS OF THE PARTY OF

of each:	
	Decimator v
Perimeter =	Perimeter =
	5 cm length and 2 cm width, then find
perimeter and area.	
Perimeter =	
	.,
Area =	
	rea of 30 square meters.
	of this rectangle. Draw your answer with
the dimensions.	
Perimeter =	
	·



Something Is Missing!

Rectangle

- If we have the perimeter or area of a rectangle and one of its dimensions, (length or width):
- We can get the other dimension as shown in the following figure.



Area (A)

Length = Area + Width

 $L = A \div W$

Length = (Perimeter $\div 2$) – Width $L = (P \div 2) - W$

Area (A)

Width = Area + Length

 $W = A \div L$

Perimeter (P)

Width = (Perimeter + 2) - Length

 $W = (P \div 2) - L$

(Ex.1: The area of a rectangle is

32 cm², and its length is 8 cm.

Find its width and its perimeter.

Answer: $W = A \div L$

 $= 32 \div 8$

= 4 cm.

P = 2L + 2W

 $= 2 \times 8 + 2 \times 4$

= 16 + 8

= 24 cm.

(Ex.2: The perimeter of a rectangle is

20 cm, and its width 3 cm.

Find its length and its area.

Answer: $P \div 2 = 20 \div 2$

= 10 cm.

L = 10 - 3

 $= 7 \, \text{cm}.$

 $A = L_X W$

=7X3

 $= 21 \text{ cm}^2$.

Tiet tat a

If we have the square, we can get the length of the side by dividing the perimeter ÷ 4.

Side length = Perimeter
$$\stackrel{\checkmark}{\sim} 4$$
 $L = P \div 4$

3: A square has a perimeter of Find its side length and area.

Answer:
$$L = P \div 4$$

$$= 24 \div 4$$

= 6 cm.

$$A = L \times L$$

$$= 6 \times 6$$

$$= 36 \text{ cm}^2$$
.

Ex. 4: A square has an area of line.

Find its side length and

perimeter.

Answer:
$$25 = 5 \times 5$$

$$P = L \times 4$$

$$=5 \times 4$$

$$= 20 cm.$$

1 Complete the following table:

	Length	Width	Perimeter	Area
a	10 cm.	7 cm.		***************************************
0	**************************************	6 m.	30 m.	**************************************
0	12 mm.		40 mm.	
0	**************************************	4 cm.	######################################	36 cm ² .
е	8 dm.		***************************************	48 dm².

2 Complete the following table:

	Side Length	Perimeter	Area
a	6 cm.	24 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A	######################################
•	***************************************	28 m.	\$1000000000000000000000000000000000000
0			64 mm².

· · · · · · · · · · · · · · · · · · ·	des in the oppo	site figure. Then
find the perimeter and area of th	e shape.	4cm
	5c	m
	cm	
	5cm	
	100	cm
Adam wants to make a frame for	his father's pic	ture.
The image is a rectangle with an		
Find the length and width of the		
Draw the frame in two ways and		os.
Ismail needs 120 meters of wire	to build a fenc	e around his

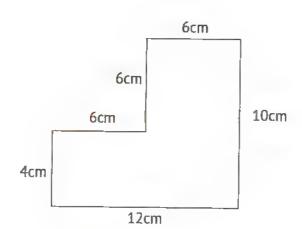


Odd Shapes

 The area and perimeter of odd shapes can be calculated in several ways, as in the example:

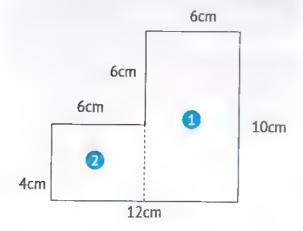


Calculate the area and perimeter of the opposite shape:



First Strategy

Divide the shape into rectangles



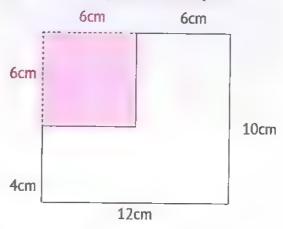
Perimeter =
$$12 + 10 + 6 + 6 + 6 + 4$$

= 44 cm.

Area of rectangle (1) =
$$10 \times 6 = 60 \text{ cm}^2$$
.
Area of rectangle (2) = $6 \times 4 = 24 \text{ cm}^2$.
Area of the shape = $60 + 24$
= 84 cm^2 .

Second Strategy

Complete the shape



Perimeter =
$$12 + 10 + 6 + 6 + 6 + 4$$

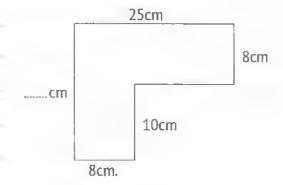
= 44 cm .

Area of the whole rectangle =
$$12 \times 10$$

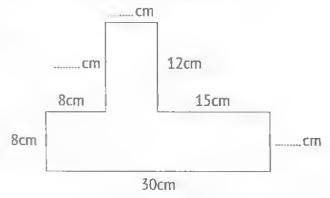
= 120 cm^2 .

Area of the added part =
$$6 \times 6 = 36 \text{ cm}^2$$
.
Area of the shape = $120 - 36 = 84 \text{ cm}^2$.

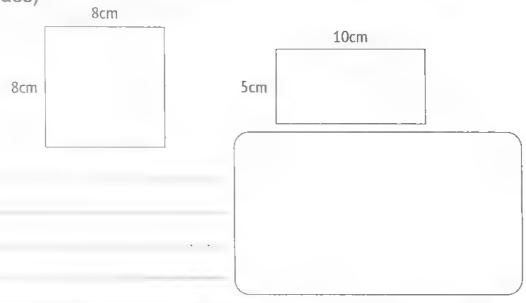
Calculate the perimeter and area of the following shape.



Calculate the perimeter and area of the following shape.



Combine the following two geometric shapes to form one odd shape. Calculate the area and perimeter of this shape. (Draw your geometric figure and write the measurements on the sides)





Growing Dimensions

Notes

Double the number 5	Means	5 X 2
• Three times the number 6	Means	6 X 3
• Four times the number 7	Means	7 X 4, and so on.
• Half of the number 20	Means	20 ÷ 2
• Third of the number 15	Means	15 ÷ 3
• Fifth of the number 15	Means	15 ÷ 5, and so on.

Example:

A rectangle has an area of 15 square meters, and its length is 5 meters.

Find the width.

Then, find the area of another rectangle whose length is twice the length and width of the first rectangle

Answer:

 The width of the rectangle 	$= 15 \div 5$	= 3 m.
- The length of the other rectangle	$= 5 \times 2$	= 10 m.
 The width of the other rectangle 	$=3 \times 2$	= 6 m.
- The area of the rectangle	$= 10 \times 6$	= 60 square meters.

1 Hussam owns a poultry farm, which is 10 meters long and 5 meters wide. Emad owns a poultry farm. Its length and width are three times the length and width of Hussam's farm.

Draw a diagram showing eacl	n of the two farms, showing the
measurements on the drawing	g. Then find the area and
perimeter of each.	

Ramy owns a piece of land in the form of a square whose sides are 40 m long. He built a house in the shape of a rectangle whose length is haif the length of the land and its width is fourth the width of the land.

He left the rest of the land as a garden for the house (as in the figure). Calculate the length and width of the house and then calculate the area of the garden.



A mural of area 24 square meters and 8 meters long. What is the width of this mural?

Another mural is the same length as the first mural and three times the width as the first one.

Find the perimeter and area of the second mural.

Theme 2

Mathematical Operations and Algebraic Thinking

Unit (5) Multiplication as a Releasenship



Understanding Multiplicative Comparison

Learning Objectives:

By the end of this lesson, the student will be able to:

- Develop a comparison using multiplication.
- Represent comparison problems using multiplication.





Creating Multiplicative Comparison Equations

Learning Objectives:

By the end of this lesson, the student will be able to:

- Create equations to represent comparison problems using multiplication.
- Use symbols in equations to represent unknown values.



Solving Multiplicative Comparison Equations

Learning Objectives:

By the end of this lesson, the student will be able to:

 Create equations for comparisons using multiplication and solve these equations.





Commutative Property of Multiplication

Learning Objectives:

By the end of this lesson, the student will be able to:

- Explain the Commutative Property of Multiplication.
- Use the Commutative Property of Multiplication to solve problems.



Patterns of Multiplying by 10s

Learning Objectives:

By the end of this lesson, the student will be able to:

- Use the property of the Neutral Element in multiplication to solve problems.
- Use the Zero Element Property in multiplication to solve problems.
- Know the patterns that are repeated when multiplying by 10, 100, 1,000.



Exploring Patterns in Multiplication

Learning Objectives:

By the end of this lesson, the student will be able to:

- Use place value concepts of multiplication in multiples of 10, 100, 1,000.
- Explain the patterns of multiplication in multiples of 10, 100 and 1,000.



Exploring More Patterns in Multiplication

Learning Objectives:

By the end of this lesson, the student will be able to:

- Explain the Property of Association in the multiplication process.
- Use the Associative Property in the multiplication process to solve multiplication problems.



Applying Patterns in Multiplication

Learning Objectives:

By the end of this lesson, the student will be able to:

 Use Decomposition of a number into its factors and a Associative Property of Multiplication to solve equations with multiples of 10, 100, 1,000.







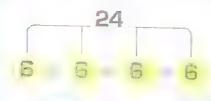
Concept 5.1

Develop Multiplicative Comparisons

BEBU

Transfer Mulbibliostlys Compatibility

 $4 \times 6 = 24$, The number 24 can be decomposed as:



- Compare
- 18 and 6
- 18 is triple (three times) 6

- (1) Compare
- 18 and 3
- 18 is six times 3

1 Compare the following numbers:

- (a) 15 and 3
- 15

3.

- 15 and 5
- 15

5.

- 3 20 and 4
- 20

4.

- 21 and 7
- 21

7.

- 42 and 6
- 42

6.

2 Complete the following:

- (a) 4+4+4+4+4+4= x
- (a) 3+3+3+3+3=

 $^{\circ}$ 7 x 3 =

6 x 5 =

Strip Diagram:

6	6	6	6	6

- In the previous diagram, we find that the number (6) is repeated (5 times).

$$6 + 6 + 6 + 6 + 6 + 6 = 30$$
 (e) $6 \times 5 = 30$



$$6 \times 5 = 30$$

And we can say that 30 is 5 times 6

Complete each of the following using the Strip Diagrams:

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а	и	=	Н
ч	Ю	•	ч

_	4		4	_	4		4	
ere in still it.	4==++=+	 ******	is	S	## 0 44 4 4 # # # 4 4 4 4 4 4 4 4 4 4 4	-1411100000001A	times	4.



7	7	7	7	7	7	7
				times		

Θ

2	2	2	2

.....times

_	
	١
E91	
~	

3	3	3	3	3	3	3	3	3
		is			time	S	****** * * ****	., 4

4 Divide the Strip Diagrams according to the numerical sentence:

a

28 is four times 7.

0

28 is seven times 4.

24 is three times 8.

0

0

30 is three times 10.

Lanson

Greating muitiplicative Comparison Equal.

Equation

It is a mamemanical formula in which numbers and symbols are used to express the equation relationship in a number sentence.

Where the unknown number is expressed by one of the letters (x, y, z, a, b, ...) and it is called "variable".

Converting a Numerical Sentence into an Equation,

1						
	A	number	equals	5	times	1

24 equals 4 times a number.

= 5 X 9

27 equals times 1.

Write an equation for the following comparisons. Use a symbol to represent the unknown number:

- A number is 7 times 4:
- A number is 4 times 3:
- A number is equal to twice the number 7:
- 18 equals 6 times a number:

Aida walked to school on Monday and arrived in 21 minutes. On Tuesday, she rode her bike to school and arrived 7 minutes later. How many times was riding a bike faster than walking?

Sarah ran around the football field 4 times. Aya ran around the football field twice as many times as Sarah. How many times did Aya run around the football field?

Rana has Laggoes. Her brother Sherif has 18 mangoes. How many times is the number of mangoes with Sherif the same as the number of mangoes with Rana?

Lesson

Sering Mullulle II Garmannen Equations

Solve the Equation = Find the Value of the Unknown (the Variable)

(Ex.:	Write an equation for comparisons, use symbols to represent the unknown,
	then find the value of the unknown.

A number equals , times	b equals itimes a number
Equation: $X = 3 \times 8$	Equation: 28 = 4 X y
Solution: $\mathbf{X} = 24$	Solution: $y = 28 \div 4 = 7$
Write an equation for compa	risons, use symbols to represent the
unknown. Then find the valu	e:
a A number is equal to times	*
	Solution : IIII AND
6 A number is equal to 6 times 5	.Equation :
	Solution :
⊕ A number is equal to → times ½	
	Solution :
d 18 equals , times a number.	
	Solution :
equals times a number.	

42 equals /	times a number. Equation
	Solution
write the m	ord problems and think about the comparisons, ther ultiplication equation that represents this problem: of to represent the unknown number. Then solve the
Rana has brother Kari Equation Solution	m has. How many candy bars are there with Karim? :
🏮 Alaa ran aro	ound the football field
3 times as n	nany times as Alaa.
How many t	imes did Aya run around the field?
Equation	:
Solution	:
Saleh has How many t	imes is the number of oranges with Adel the same as the
number of o	ranges with Saleh?
Equation	# ====================================
Solution	:
The height o	of a building is
How many ti	imes the height of the building is the same as the height
of the tree?	
Equation	
Solution	*



Properties and Patterns of Multiplication



Commutative Property of Multiplication

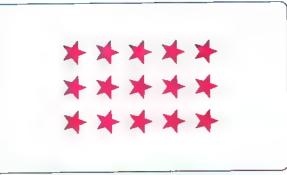
Arrays and the Commutative Property

- Note the following arrays:



5 rows of 3 stars each.

 $5 \times 3 = 15$



3 rows of 5 stars each.

 $3 \times 5 = 15$

In the opposite array:

4 rows, 3 circles in each row:

3 columns, 4 circles in each column:

 $4 \times 3 = 12$

 $3 \times 4 = 12$

So, 4 X 3 = 3 X 4

– From above, we find that:

4 X 3 = 3 X 4 $5 \times 3 = 3 \times 5$

That is, the product of multiplication is not affected by changing the places of the factors in the multiplication process (Commutative Property).

1 Complete the following:

$$= 7 \times 5$$
.

$$3 = 3 \times 6$$

Use the property of Multiplication to find the unknown value:

$$\textcircled{b} y \times 4 = 4 \times 10$$
 $y = -$

$$\textcircled{6} 6 X 3 = 3 X m =$$

Lamia has Write an equation using the Communication to describe two ways in which she can arrange the books.



Patterns of Multiplying by 10s

• Identity Property of Multiplication:

(The Property of the Neutral Element in the multiplication operation)

Note that:
$$8 \times 1 = 8$$
 1 \times 8 = 8

$$S_0$$
, $8 \times 1 = 1 \times 8 = 8$

That is, the product of any number multiplied by (1) is the same number.

The number "1" is the neutral element in the multiplication operation.

Zero Property of Multiplication (Multiplying by zero):

Note that: $8 \times 0 = 0$ 0 x 8 = 0

 S_0 , 8 x 0 = 0 x 8 = 0

The product of any number multiplied by zero is zero.

Multiplying by 10, 100, 1,000,

$$6 \times 10 = 60$$
 , $6 \times 100 = 600$, $6 \times 1,000 = 6,000$

- When multiplying by 10, 100, 1,000,......
- · Take out the zeros on the right and then complete the multiplication.

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Billions (Milliards)	Millions			th Hievilica					
Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
			5	3	1	8	6	4	2

We notice that:

• The digit 2 is in the Ones place and its value is = (2 X 1).

. In the last the last the second

- The digit 4 is in the Tens place and its value is 44 = (4 X 10).
- The digit 6 is in the Hundreds place and its value is = = (6 x 100).
- The digit 8 is in the Thousands place and its value is $3.3.3.0 = (8 \times 1,000)$.

The digit is in the an area wis place and its value is (1 X 10,000).

The digit is in the place and its value is = (3 X 100,000).

The digit is in the place and its value is = (5 X 1,000,000).

1 Complete the following:

- ⑤ 5 x = 0.
 - x 6 = 6
 - (9) 1 x = 7.

- **6** x 7 = 0.
- **d** ____ x 1 = 9.
- **3** x = 3.

2 Find the result:

- € 8 x 10 = .
- © 1,000 x 6 =
- ② 20 x 100 =

- 9 x 100 = ____.
- **1**2 x 10 =
- **1** 30 x 1,000 =

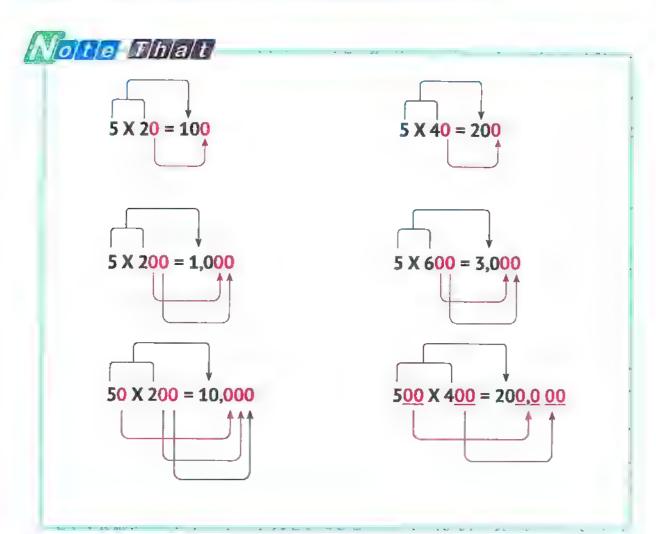
3 Complete the following:

- **②** 4 x = 40.
- 6 x = 600.
- x = 20 = 200.

- **6** 8 x = 8,000.
- **1**0 x = 1,000.
- 10 x = 100.



Exploring Patterns in Multiplication



1 Find the result:

2 Complete the following:

$$\times$$
 50 = 3,000.

$$\times$$
 10 = 50,000.

The length of the ant is about 2 mm. If the length of the crocodile is 1,144 aimes the length of the ant, find the length of the crocodile.



Exploring More Patterns in Multiplication

Associative Property of Multiplication



In the opposite picture, there are:



Each plate contains 6 eggs. Each row contains Two rows of egg 4 egg plates.

plates.

To calculate the number of eggs =

The First Method:

Number of plates

 $= 4 \times 2 = 8$ eqq plates.

The total number of eggs

 $= 8 \times 6 = 48 \text{ eggs}.$

$$6X4X2 = (4X2)X6 = 8X6 = 48$$

The Second Method: • Number of eggs in each row = 6 x 4 = 24

 The total number of eggs $= 24 \times 2 = 48 \text{ eags}.$

$$6X4X2 = (6X4)X2 = 24X2 = 48$$

$$S_0$$
, $(4X2)X6 = (6X4)X2$

When multiplying more than one number, any two numbers can be multiplied first and this does not affect the result.

(Associative Property)

Find using the

2 Complete the following:

(5 x
$$\times$$
 6 = \times (3 x 6).

Use the to count the number of eggs in the picture.

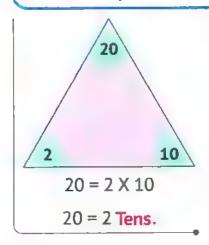
Emad bought of water bottles. Each package contains of bottles, each row has a poide.

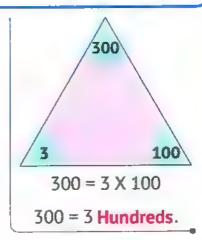
How many bottles of water did Emad buy?

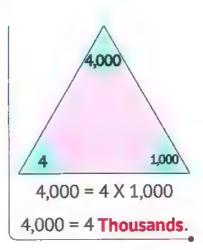


Applying Patterns in Multiplication

Decomposition of Multiples of 10:







Example:

Use Decomposition of a number into its factors and Associative Property of Multiplication to solve each of the following:

Solution:

1 Complete the following:

Use Decomposition of a number into its factors and Associative Property of Multiplication to solve each of the following:

Unit 6 Understanding Factors and Multiples



Identifying Factors

Learning Objectives:

At the end of this lesson, the student will be able to:

- Define the factors of any integer.
- Find all the factors of a given number between 0 and 100.
- Explain the patterns they notice in numbers whose factors are 2, 5 or 10.



2

Prime and Composite Numbers

Learning Objectives:

At the end of this lesson, the student will be able to:

- Find all the factors of a given number between 0 and 100.
- Explain the patterns he/she notices in numbers that have a factor of 2, 3, 5, 6 or 9.
- Determine whether a number is prime or not.



Greatest Common Factor (G.C.F.)

Learning Objectives:

By the end of this lesson, the student will be able to:

- Find the common factors of two integers.
- Determine the greatest common factor of two integers.



Identifying Multiples of Whole Numbers

Learning Objectives:

By the end of this lesson, the student will be able to:

- Define multiples of integers.
- Determine multiples of integers.



5

Common Multiples

Learning Objectives:

By the end of this lesson, the student will be able to:

 Determine the common multiples of two numbers.





Relationships Between Factors and Multiples

Learning Objectives:

By the end of this lesson, the student will be able to:

- Explain the relationship between factors and complications.
- Determine whether a number is a multiple or a factor of another number.

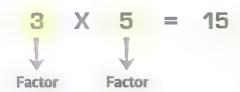




Concept 6.1 Understanding Factors



leentifying Factors of Whole Numbers



From the above, we find that 🕒 is one of the factors of the number 😂 and is one of the factors of the number 15.

Find all the factors of the number 18.

Factors of 18 can be found in several ways:

Factor Pairs	Factor Tree	Factor Rainbow	Factor Diagram
1 X 18	18		1 18
2 X 9			2 9
3 X 6	1 2 3 6 9 18	1 2 3 6 9 18	3 6

From the above, we find that the factors of 18 are 1, 2, 3, 6, 9, 18.

Find all the factors of 16.

The factors of 16 are:





- Factors are written without repetition.
- The number (1) is a factor of all numbers.
- Any number has at least two factors, the number itself and one, except the number (1) has only one factor.

1 Find all the factors	of each number using	the Rainbow and the
Factor Diagrams:		
a 12:		
The factors of 12 a		
b 40:		
The factors of 40 ar	re:	
© 36:		
The factors of 36 ar	re:	
2 Find all the factors (Use the method yo	of each number of the	following:
a 25	6 48	© 19
The factors of 25 are:	The factors of 48 are:	The factors of 19 are:
44-44-7/571141375)))**********************************	400 1111 400 140 140 140 140 140 140 140	***************************************

3 Using the following table:

Color the multiples of 2, the multiples of 5 and the multiples of 10, in different colors.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
/1	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

numbers whose factors are 2, 5, 10:

Circle the factors of the following numbers:

- (1) 1510) (2
- (2) 30(2 10)
- (3) 12(2 10)
- (4) 25(2 10)
- (5)36(2 5 10)



Prime and Composite Numbers



Number (2):

It is the factor of a number if this number is an even one.
 (Ones ⇒ 0, 2, 4, 6, 8).

example: 2 is a factor of 14 because it is an even number.

Number (3):

It is the factor of a number if the sum of the digits of this number is
a multiple of (3).

Recample: 3 is a factor of 72 because 2 + 7 = 9, 9 is a multiple of 3.

Number (9):

It is the factor of a number if the sum of the digits of this number is
 a multiple of (9).

Example: 9 is a factor of 126 because 6 + 2 + 1 = 9 and 9 is a multiple of 9.

Number (6):

 It is the factor of a number if this number is an even number and the sum of the digits of this number is a multiple of (3) or that 2 and 3 are factors of this number.

Example: 6 is a factor of 96 because it is an even number and 6 + 9 = 15Also, the number 15 is a multiple of (3).

Number (5):

It is the factor of a number if the Ones digits of the number is "0" or "5".

example: 5 is a factor of 80 as its Ones digit is 0.

Complete the following table as in the example:

Number		Factors of the Number							
		2	3	6	9	5			
Œx.	24	1	1	1	Х	X			
(1)	15	\$40.husundhudhb0+PVVPV	$\Delta \phi \psi \otimes \phi \phi \psi \otimes \phi \psi \otimes \phi \otimes \phi \otimes \phi \otimes \phi \otimes \phi \otimes$	ஒரு மாழ் இழ்ந்திறு நடைக்கும் எனக் பெருக்க		医白金属 医香烟状形容的 计分类设计 化水水溶液			
ô	36	pprojectorate historic + hottor	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	化化合物 化分子 化水子洗涤 医阴炎 化二甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	19-11 10 days (1-4-4-5) 25 (1-4-5-11) 25 (1-4-5-11) 25 (1-4-5-11)	ტუფიბუფი ატანე ანტი ატმია d			
(13)	10	ագործ գործության հեն մայրեն նաժած	wy, $\hat{a} = \hat{a} + a$		ழகுமா வரமும் மார்க்கள் கிகிக்கில் சிகிக்கில் சிகிக்கில் சிகிக்கில் சிகிக்கில் சிகிக்கில் சிகிக்கில் சிகிக்கில்	\$4.\$\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			
(3)	18	140.485pp # \$1006 w600000000	金金金属 医中间传染 化水黄铁 经股本 有 在 计设备分	erpen erwischigt op in die in Ade Greien III	g njoyangu dd fod gof y Yaf y yn 40 had				
Ę,	40	\$ has 3 rough \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	p d 中介 北西森 州太南州 在南 12 日介 中中 中 9 甲	कृतक कृतनीय कृत्यास समास तेनी हैं तेन ते हैं है के		gaqasaphqahnadanddddise			
	63	10-2-10 quan marcon has de 21 d + 2 + 2 + 2 + 2 + 2 + 2 + 2	9400 H0000 min na hráda P040	ուսանորիը արդաքակականության և արդաքանության և արդաքական հարարան և արդաքանական հարարանության և արդաքանական հարա	m grád def defe the tride of the second	· · · · · · · · · · · · · · · · · · ·			

Prime Numbers:

Are numbers that have only wo ractors, (the same number and one).

The factors of 6 are:

 $(1, 2, 3, 6) \Rightarrow 4$ factors

So, the number 6 is not a prime number.

The factors of 5 are:

 $(1,5) \Rightarrow 2$ factors

So, the number 5 is a prime number,

The factors of 1 are:

(1) ⇒ Only one factor

So, the number 1 is not a prime number.

2 Using the following table:

			_						
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Circle the numbers (2, 3, 5, 7), then cross out all the multiples of these numbers. Circle all the remaining numbers, except one. The numbers enclosed in a circle are:

(These are the prime numbers less than 100)



All prime numbers are odd numbers, except 2 is an even number.

Write down all the and one of the following numbers. Then write if the number is a prime one or not:

Number		Factors of the Number	Prime Number or Not
138	14		
	46		
(3)	22		
(3)	59		
3	50		
4	29		

Complete the following:

:	An	number	between	20 and	30. Some	of its factors	are 1	, 1, 0,	
	and 14.								

The number is:

- An number greater than 40 and less than 60 with 40 factors. The number is:
- number, and are from its factors, the Tens place digit is less than the Ones place digit.

The number is:



Greatest Common Factor (G.C.F.)

To find the greatest common factor between two numbers, we follow these steps:

- Tind the factors of each number through one of the previous methods.
- 2 Rearrange these factors from least to greatest.
- 3 Determine the common factors between the two numbers.
- 4 The largest number in the common factors is the Greatest Common Factor (G.C.F.).

example: Find the common factors of the numbers 18 and 24. Then find the greatest common factor (G.C.F.) for them:

1	18	1 2	24 12
2	9	2	12
3	6	3	8
		4	6

- Factors of the number 18 are: 1 , 2 , 3 , 6 , 9 , 18.
- Factors of the number 24 are: 1 , 2 , 3 , 4 , 6 , 8 , 12 , 24.
- The common factors of 18 and 24 are: 1 , 2 , 3 , 6.
- The greatest common factor (G.C.F.) is: 6.

Find the commencer of each of the following numbers:

a 12 and 16.	
Factors of the number 12 are:	
Factors of the number 16 are:	
The common factors are:	10-2 4
The greatest common factor (G.C.F.) is:	*** 4
1 20 and 30.	
Factors of the number 20 are:	
Factors of the number 30 are:	10-17- II
The are:	
The (G.C.F.) is:	
② 21 and 35.	
© 21 and 35. Factors of the number 21 are:	4
	a di
Factors of the number 21 are:	
Factors of the number 35 are:	n eve å
Factors of the number 21 are: Factors of the number 35 are: The common factors are:	B cere di
Factors of the number 21 are: Factors of the number 35 are: The common factors are: The greatest common factor (G.C.F.) is:	ave å
Factors of the number 21 are: Factors of the number 35 are: The common factors are: The greatest common factor (G.C.F.) is:	a d
Factors of the number 21 are: Factors of the number 35 are: The common factors are: The greatest common factor (G.C.F.) is: 11 and 15. Factors of the number 11 are:	A

-14	The fourth grade of primary school students will go on a school trip. There are 36 girls and 27 boys. The pupils will be divided
	into equal groups of girls and equal groups of boys.
	What is the largest number of groups that can be formed so that each group has the same number of pupils?
	How many boys are in each group of boys? How many girls are
	in each group of girls?
•	Amira and her friends are going for a walk. Amira wants to take
	apple snacks and some candy in the journey. She has 24 apples
	and 36 small bags of candy.
	How many snacks can Amira take if each package contains
	exactly the same number of apples and the exact same number
	of candy bags?
	How many apples are there in each package?
	How many bags of candy are there in each package?

Concept 6.2 Understanding Multiples

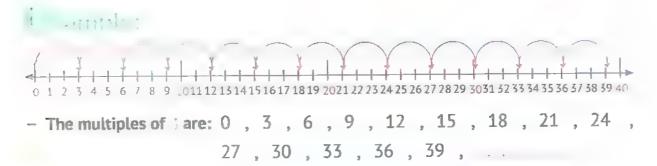


Identifying Multiples of Whole Numbers

(The Multiple)

of a given integer metaplied by any other integer. A multiple is the 12 is a multiple of 3 and 4 because $3 \times 4 = 12$.

Multiples of a number can be found by the Tourning on the Number Line:



Find the multiples of by the Number Line:



The multiples of 2 are:

Find the multiples of by it was not an the Number Line:



The multiples of 5 are:

Use the following hundred table and color the multiples:

Color t	the n	nultip	les of	4.
---------	-------	--------	--------	----

The multiples of 4 are:

- 	
## E. * # # # # # # # # # # # # # # # # # #	

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

6 Color the multiples of 10.

The multiples of 10	are:

#141444###############################	т филма на нама и пр прет + 3+4+44 го стото из година и по пра
D- 1818 für 6 musinannung 1947 1947 1948 1948 1940 1940 ungunn propessioles	en maj men maraman na nama nama nama na paga en paga ga jaga ga jaga ga persona en maraman na

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

4 Answer the following:

Skip Count by 8 and fill in the blanks:

	8	9 *****************	, 24	y	3 *************************************	,48	, .		,		,	+1+11-14	•	•
--	---	---------------------	------	---	---	-----	-----	--	---	--	---	----------	---	---

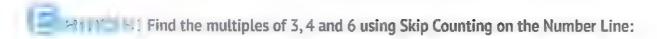
b Write 10 multiples of 6:

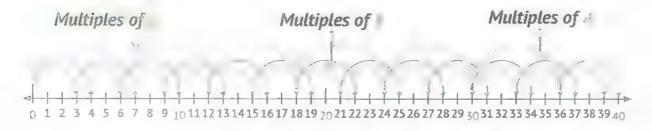
Write 5 multiples of 7:

@ Circle the numbers that are multiples of 9:

19 , 27 , 54 , 99 , 39 , 42 , 36 , 45 , 66 , 78 , 100.

MESSON Common Multiples





- The multiples of 3 are: 0, 3, 6, 9, 12, 15, 18, 21, 24 , 27 , 30 , 33 , 36 , 39.
- The multiples of (are: 0, 4, 8, 12, 16, 20, 24, 28, 32 , 36 , 40.
- The multiples of 6 are : 0 , 6 , 12 , 18 , 24 , 30 , 36.
- The common multiples of 3, 4 and 6: 0, 12, 24, 36.

Find the milimies of each of the numbers 2 and 3, up to 20. Then find the commercialitiples between them:

- The multiples of 2 are:
- The multiples of 3 are:
- The opposituations of the two numbers are:

2	Find the multiples of each of the numbers 4 and 6, up to 30. Then						
	find the common multiples between them:						
	- The multiples of 4 are:						
	→ The multiples of 6 are:						
	- The common multiples of the two num	ibers are:	15 ** P**** PB4* P5 B1				
3	Find the two common multiples between	een each of the followir	ng:				
	a The two numbers 4 and 8: (and)				
	The two numbers 2 and 5: (and						
	The two numbers 6 and 8: (and						
	The two numbers 7 and 6: (and)				
	• The product of any two numbers is a comm	on multiple of them.					
4	Complete:						
	The common multiples of 2 and 5 are	:					
	0,10,20,30,						
	The common multiples of 3 and 4 are	•					
	0 , 12 , 24 , 36 , ,		Control W				
	The common multiples of 6 and 8 are	•					

0 , 24 , 48 , , .



Malationships Between Factors and Multiples

Remember:

Multiple

From this figure:

and are factors of

& 28 is a multiple of 4 and 7

Complete the following:

If , then is a multiple of the two numbers and _____, then ____ and _____ are factors of the number

if = x, then 48 is a multiple of the two numbers of 6 and _____. Then, 6 and ____. are factors of the number

An ___ number is a multiple of 3. 4 and 6 and lies between 20 and 30. The number is _

 An number is a multiple of 3 and 6 and lies between 20 and 40. The number is

The relationship between 2, 3 and 3 is that

Unit 🕖 Multiplication and Division: Computation and Relationships



The Area Model Strategy

Learning Objectives:

By the end of this lesson, the student will be able to:

- Use Rectangle Area Models to represent the multiplication of a 2-digit-number by a 1-digit-number.
- Explain how to use place value in multiplication.



The Distributive Property

Learning Objectives:

By the end of this lesson, the student will be able to:

- Use the Rectangle Area Model to multiply a 1-digit-number by an integer up to four digits.
- Explain the Distributive Property of Multiplication.
- Use the Distributive Property of Multiplication to multiply a 1-digit-number by an integer up to four digits.



The Partial Products Algorithm

Learning Objectives.

By the end of this lesson, the student will be able to:

 Use the Partial Products Algorithm to multiply a one-digit-number by an integer up to four digits.



The Standard **Multiplication Algorithm**

Learning Objectives:

By the end of this lesson, the student will be able to:

- Use Estimation to find the product of the multiplication process in multi-digit-number problems.
- Use the Standard Algorithm to multiply a one-digit-number by an integer up to four digits.



Connecting Strategies

Learning Objectives:

By the end of this lesson, the student will be able to:

 Use the Standard Algorithm to multiply a one-digit-number by an integer up to four digits.



Two-Digit Multiplication

Learning Objectives:

By the end of this lesson, the student will be able to:

- Recognize patterns when multiplying two multiples of 10.
- Multiply a two-digit-number by a multiple of 10.
- Evaluate the reasonableness of the answer that was assessed using Estimation and Mental Arithmetic



Area Models and 2-Digit Multiplication

Learning Objectives:

By the end of this lesson, the student will be able to:

 Use the Area of a Rectangle Model to solve the problems of multiplying a two-digit-number by a two-digit-number.



Algorithms and 2-Digit Multiplication

Learning Objectives.

problems.

By the end of this lesson, the student will be able to:

 Apply a variety of strategies to solve a two-digit-number multiplying a two-digit-number



Putting It All Together

Learning Objectives.

By the end of this lesson, the student will be able to:

- Apply the Three-time Reading Strategy to analyze and solve word problems.
- Use addition, subtraction, or multiplication to solve word problems.



Exploring Remainders

Learning Objectives:

By the end of this lesson, the student will be able to:

- Determine the dividend, the divisor and the quotient in the division question.
- Solve division problems.
- Explain what the remainder of the division represents in the division problem.



Patterns and Place Value in Division

Learning Objectives:

By the end of this lesson, the student will be able to:

 Use the concept of place value, the facts of the multiplication process and the patterns used with zeros to divide the multiples of 10, 100, 1,000 by a one-digit-divisor.



The Area Model

Learning Objectives:

By the end of this lesson, the student will be able to:

 Use Rectangle Area Models to represent and solve division problems.

The Partial Quotients Algorithm

Learning Objectives:

By the end of this lesson, the student will be able to:

 Use a Partial Quotient Algorithm to divide up to four-digit-dividend by one-digit-divisors.



The Standard Division

Learning Objectives:

By the end of this lesson, the student will be able to:

- Estimate quotients using place value properties and patterns of multiplication and division.
- Use the Standard Algorithm to solve division problems.



Division and Multiplication

Learning Objectives:

By the end of this lesson, the student will be able to:

- Use the place value properties to find the quotient accurately.
- Use the relationship between multiplication and division to check the accuracy of the quotient



Solving Challenging

Learning Objectives.

By the end of this lesson, the student will be able to:

- Organize information into word problems to determine when to add, subtract, multiply, or divide.
- Solve word problems using addition, subtraction, multiplication and division.



Multiplying by 1-Digit and 2-Digit Factors

BESON

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Birgies Strategy

When multiplying a 1-digit-number by a 2-digit-number.

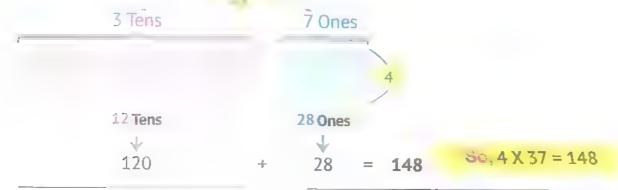
We represent the 2 digit-number, the Tens with lines and Ones with small squares. the number according to the 1-digit-number.

BARTYD Homes SKA

The number 23 is represented by two lines and 5 small squares repeated 5 times as follows:

Se, 23 X 5 = 115

ample (2): Multiply 4 X 37



1 Multiply using the Base-10 Blocks Strategy:

a 16 X 4 =

5 28 X 3 = _____

Second: Rectangle Area Model Strategy:

When multiplying a 1-digit-number by a 2-digit-number,

- Draw a rectangle.
- Represent the 2-digit-number with the long side and the 1-digit-number with the short side.
- Divide the rectangle into two parts by drawing a vertical land to represent the decomposition of the 2-digit-number.

Example (1): Multiply 23 X 5

Example (2): Multiply 6 X 78

$$70 8$$
6 X 78 = 468 6 X 20 = 420 6 X 8 = 48 6
$$420 + 48 = 458$$

Use the a - 1-3 Modern Practor to multiply:

25	5	y	24	_		
13	9	\wedge	47	_	*****************	٠

**************************************	X =,
4	***********

A car travels kilometers in one hour. How many kilometers will the car travel in 9 hours?

(Use the Replanting Area Flogel in the solution).



The school bus carries : students per trip. What is the number of students that the bus can carry during 6 trips? (Use the Rectangle Area Model in the solution).





The Distributive Property

Remember that

Expanded Form

The Distributive Property of Multiplication

5.392 = 5.000 + 300 + 90 + 2

$$6 \times (5 + 3) = (6 \times 5) + (6 \times 3)$$

 $3 \times (400 + 20 + 4) = (3 \times 400) + (3 \times 20) + (3 \times 4)$

 Using the Distributive Property to multiply a one-digit-number by an integer up to 4 digits (numbers and symbols).

Example (1): Multiply 4 X 237

Answer:

Decompose the largest number (Expanded form)
$$= 4 \times (200 + 30 + 7)$$

$$= (4 \times 200) + (4 \times 30) + (4 \times 7)$$

$$= 800 + 120 + 28 = 948$$



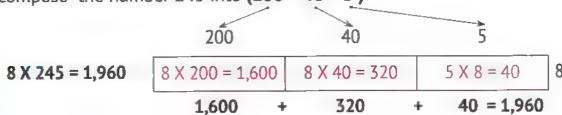
Answer:

Use the live is any openiy to solve the following problems:

- Using the Rectangle Area Model to multiply a 1-digit-number by an integer up to 4 digits.



- Draw a rectangle and divide it into 3 parts.
- Decompose the number 245 into (200 + 40 + 5)



xample (2): Multiply 7 x 6,312

Use the Area Model of a Rectangle to solve the following problems:

a 8 X 375 =	de-apparation initiation description balancies at		

Multiplication and Division: Computation and Relationsh	ips
③ 3 X 6,475 =	
of 4,962 X 8 -	
The length of the car is 245 cm, how long are 4 cars?	
(Use the Rectangle Area Mode	-1\
(OSE the Nectangle Area Mode	=1)



The Partial Products Algorithm

The Partial Products Algorithm

Each arithmetic operation is a "part" of a larger product.

(Ex.1: Multiply 7 X 328

328 Answer: Expand the largest number:

> Х 7 (328 = 300 + 20 + 8)

Step 1: Multiply the 1-digit-number by the Hundreds. (7 X 300) 2,100

Step 2: Multiply the 1-digit-number by the Tens. 140 (7 X 20)

Step 3: Multiply the 1-digit-number by the Ones. 56 (7X8)

Step 4: Add the products of the Hundreds, Tens and Ones. 2,296

(Ex.2: Multiply 9 X 83

(Ex.3: Multiply 6 X 3,702 83

X X 9 + 18,000 (6 X 3,000) 720 (9 X 80) 4,200 (6X 700) 27 (9 X 3)

12 (6X 21 747

22,212

3 702

6

Use the par rate Products Algorithm to multiply:

8 X 256 =

256 (, X ...) (X ...) (..... X)

3,986 X 6 =

3.986 (... , X) (... . . . X) (... X) (X . . .)

© 9 X 63 =

63 X (...... X) +____ 8 X 702 =

X 8 (......) +

702

(a) 125 X 4 =

① 9 X 8,465 =



The Standard Multiplication Algorithm

Similarities in Models

Example: Multiply 132 X 8

Using the Product Estimation of the multiplication process, the Area Model
of the Rectangle and the Partial Products Algorithm,

The Product Estimation	The Area of Rectangle Model				rtial Pr Algori		ts	
Estimation	100	30	2					132
100 X 8 = 800	100X8=800	30X8=240	2X8-16	8			Χ	8
	800 + 2	40 + 16 =	1,056		(8X	100)		800
					(8X	30)	+	240
					(8X	2)	+	16
							-	1,056

We notice that: the estimate is low because we rely on "Rounding Down Strategy".

1 Complete the following table:

Problem	Product Estimation	Area of Rectangle Model	Partial Products Algorithm
a 237			
X 6			

3 7,425 X 9	
=	

The Standard Multiplication Algorithm:

Multiplication Algorithm:

- Write the numbers rendically with the largest number on top.
 - Start by multiplying the lenes (8 Ones x 2 Ones = 16 Ones).
- (3) Write the number 6 in the Ones place below the line.

132

Write the number representing one Ten above the number 3 (this is called Renaming).

X 8

Next, multiply the (8 fines x 3 Tens = 24 Tens).

0

Add . (from the previous step) to 24 Ten to get 25 Ten.

5 0

Write the number 5 in the Tens place below the line.

+ 1,000

1,056

- Rename by writing the number 2 representing two
 - above the number 2 in the Hundreds place.
- And finally, multiply the Funoreds (8 Ones x one Hundred = 8 Hundreds).
- Add A warder (from the previous step) plus 8 Hundreds to get 10 Hundreds.
 - = one thousand. Write 0 in the Hundreds place and 1 in the Thousands place below the line.

2 Use the Standard Multiplication Algorithm to multiply:

a

48

7

X

Ð

324

X 6

X 9

3,248

0

36

X 6

298

X 4

(1)

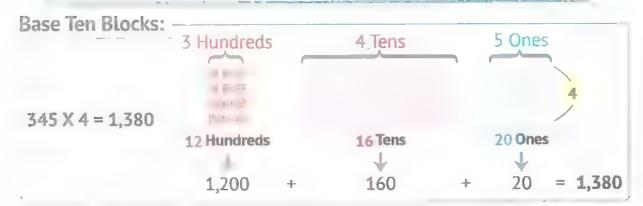
7,866

X 5



Connecting Strategies

Strategies for Multiplying a One-digit-number by an Integer up to Four Digits



Area of Rectangle Model:

$$300 40 5$$

$$345 \times 4 = 1,380 4 \times 300 = 1,200 4 \times 40 = 160 4 \times 5 = 20 4$$

$$1,200 + 160 + 20 = 1,380$$

Distributive Property:

$$4 \times 345 = 4 \times (300 + 40 + 5)$$

= $(4 \times 300) + (4 \times 40) + (4 \times 5)$
= $1,200 + 160 + 20 = 1,380$

Standard Multiplication Algorithm:

	02 345
Χ	4
	0
-1-	80
4-	1,300
	1,380

Partial Products Algorithm:

		345
	Χ	4
(4 X 300)		1,200
(4X 40)	+	160
(4X 5)	+	12
		1,380

1 Use the Standard Multiplication Algorithm to multiply (as in the example):

Ex.: 248

1,9 8 4

387X4

b 45 X 6

614X 7

Q 2,375 X 9

© 5,008 X 5

Use the following strategies to solve each problem:

456 X 7 =

· TS · I MIGGIES SETALAGY)

⑤ 3 X 124 = _____.

(Area of Rectangle Strategy)

③ 8 X 205 =

TABLE Processes Lygorithm)

3 X 124 = _____

(Distributive Property Strategy)



Two-Digit Multiplication

Multiply a 2-digit-number by a Multiple of 10)



Using the Rectangle Area Model Strategy:

$$60 2$$

$$62 \times 30 = 1,860 30 \times 60 = 1,800 30 \times 2 = 60 30$$

$$1,800 + 60 = 1,860$$

Using Distributive Property Strategy:

$$62 \times 30 = (60 + 2) \times 30$$

$$= (60 \times 30) + (2 \times 30)$$

$$= 1,800 + 60$$

$$= 1,860$$

Using Partial Products Algorithm:

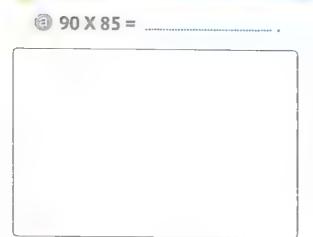
1 Use the Rectangle Area Model Strategy to multiply:

Use the	Partiai	Products	Algorithm	to	multiply:
---------	---------	----------	-----------	----	-----------

(a) 35 X 80 =

(b) 70 X 82 =

Use the Partial Products Algorithm to multiply:



Example:



Multiply:



Area Models and 2-Digit Multiplication

Using the Rectangle Area Model to Multiply a Two-digit-number by a Two-digit-number

Example (1): Multiply 36 X 42:

- Create the corresponding rectangle.
- Expand the first number: 36 = 30 + 6
 Then, the second number: 42 = 40 + 2
- Multiply the rows and columns as shown.
- Add the products of the multiplication.

		36			
	X	30	6		
	40	40 X 30	40 X 6		
40	40	= 1,200	= 240		
42		2 X 30	2 X 6		
l	2	= 60	= 12		

So, 36 X 42 = 1,200 + 240 + 60 + 12 = 1,512

Example (2): Multiply 27 X 35:

		27			
	X	20	7		
	30	20 X 30	30 X 7		
/10		= 600	= 210		
m	5	5 X 20	5 X 7		
	3	= 100	= 35		

Use the I - ... 3 - 258 model to multiply:

3 45 X 49

=

⑤ 89 X 43

= ,

28 X 69+ + --- += ___ .

49 X 37

- . + + + . . .

X
.... X X ..
= = ...

X = ... X ...
= ... X X ...
= ... X X ...

.X...X... =X... =X... .X

X

2 Ahmed bought 6 pens. If the price of one pen is 215 piasters, what is the price of all pens?

(Use the Area of a Rectangle Model to solve)

Х			
161441411141444	X =	X =	X =

X _____ + ____ + ____ + _____ .

3 38 persons will travel together by bus, and a single ticket costs 35 pounds. What is the price of the tickets for all passengers?

(Use the Area of a Rectangle Model to solve)

X	40 EP\$P479794111111111111111111111111111111111	
aper rapadelle pútodyv	=	XXX
\$ >\$	× =	

Lession 8

Masanhor and 2-Digit Multiplication

Multiplying a Two-digit-number by a Two-digit-number

To multiply 76 x 54, we can use one of the multiplication algorithms.

We put the two numbers <u>vertically</u>, the larger number above the <u>smaller</u> number, and then follow the steps as shown.

1) Decompose numbers into Ones and Tens:

$$(76 = 70 + 6)$$
, $(54 = 50 + 4)$

- 2) Multiply the ones of the first number by:
 - the Ones of the second number (6 x 4 = 24) and the of the second number ($e \times 50 = 300$)
- 3) And also multiply the Tens of the first number by:
 - the Ones of the second number (70 x 4 = 280)
 - and the Tens of the second number (70 x 50 = 3,500)
- 4) Then, we add all the products:

- 1) Decompose the ... number into Ones and Tens: (54 = 50 + 4)
- 2) Multiply the first number by:
 - the Ones of the second number.

$$(76 \times 4 = 304)$$

- 3) Multiply the first number by:
 - the Ones of the second number.

$$(76 \times 50 = 3,800)$$

4) Then, we add all the products:

$$304 + 3.800 = 4.104$$

Partial Products Algorithm:

Standard Multiplication Algorithm:

Find the product of each of the following:

Begin by estimating the product of the multiplication and then solve the problems using the Partial Product Algorithm and the Standard Multiplication Algorithm.

a 28 X 53 =

,— (Estimation:
	147111444 - 17
	X

Partial Product Algorithm:

	,
	X
(X)	
(X)	+
(X)	+
(X)	+

Standard Algorithm:

	X
(X)	
(X)	+

6 67 X 48 =

_	Estimation:
	- ***********

Partial Product Algorithm:

	X
(X)	
(X)	+
(X)	+
(X)	+

Standard Algorithm:

				X
(X	***********)	***********
(X)	+

© 95 X 32 =

X

Partial Product Algorithm:

	X
(X)	404000411011111
(X)	+
(X)	+
(X)	+

Standard Algorithm:

		X
(. X)	
(. X)	1
		-

BBS0

Three-time Reading Strategy to Solve Word Problems

First Read Determine what happens in the problem.

in the problem. Determine the Second Read

Determine the questions that can be asked in this problem. Third Read

kample:

Aya draws pictures and sells them in art galleries. She takes 56 pounds for the large painting, and ... pounds for the small painting. Last month, Aya sold in large paintings and three small paintings.

What happens in the problem?

Aya sold large paintings for 56 pounds each and 3 small paintings for 24 pounds each.

What are the values in the problem?

(the price of a large (the price of a small painting) painting). 6 large paintings. 3 small paintings.

What questions can be asked in this problem?

How much money did she get for selling all her paintings?

Answer:

- The price of the 6 large paintings = 6 X 56 = 336 pounds.
- The price of the 3 small paintings = 3 X 24 = 72 pounds.
- The price of all paintings = 336 + 72 = 408 pounds.
 - On Thursday, a butcher sold 210 kilograms of minced meat. On Friday, he sold twice that amount. On Saturday, he only sold 130 kilograms. How much more quantity did the butcher sell on Friday than on Saturday?

Ans	wer:
	William International Control of the
2	Malik walked 8 km on Friday and 6 km on Saturday.
	Malik repeated this every weekend for 6 weeks.
	How many kilometers did Malik walk at the end of the six weeks?
Ans	How many kilometers did Malik walk at the end of the six weeks?
Ans	

a particle and a

A salesperson must drive 500 km. In the first 3 hours, he was driving at 85 kilometers per hour. Over the next two hours, he traveled 35 kilometers per hour. How many kilometers are left for him to drive?

Answer:

Ahmed drives for wo hours and covers 200 kilometers. Mona drives for 5 hours and covers 270 km. Hoda also drives for hours, but travels 70 kilometers less than Mona. How many kilometers do they all drive?

Answer:





Here are Three Word Problems to be Read Carefully:

There are 72 students in the playground. We need to divide the students into 8 teams.

How many students are there in each team?

Solution:

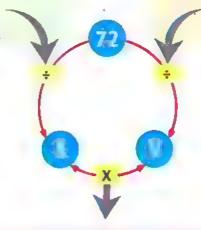
 $72 \div 8 = 9$ students.

There are 72 students in the playground. We need to divide the students into teams, so that each team includes 9 students.

How many teams can be formed?

Solution:

 $72 \div 9 = 8 \text{ teams.}$



There are 8 teams playing football, and each team has 9 players.

How many students are there in each team?

8 x 9 = 72 students.

(From the above we note that:)

- The numbers are the same, and the problems are all about equal groups (teams).
 However, you can use different operations to solve each of these problems.
- Multiplication: things are already in equal groups.
- · Division: things must be divided into equal groups.

Example:

Saleem brought |- pies to give to four of his friends. How can Saleem divide the pies evenly?

The corresponding graph can be used to solve this problem.

When you divide the pies among the four friends,

each person's share will be 5 pies, and the remaining will be 2 pies.



Relations

 $14 \div 4 = 3$ and the remainder is 2.

In the previous question, we find that:

15 ÷ 4 = 3 Remainder (R) 2

Dividend

It is the number that is divided in the problem.
(The sum of things)

Divisor

The number of equal groups or the number in each group.

Quotient

The answer to the division problem.

Remainder

The remaining value after all things are divided equally.

Complete the following table:

Problem	Dividend	Divisor	Quotient	Remainder
② 25 ÷ 4	1:0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-	\$\$####################################		#0400#6400#00haatabaada
⑤ 30 ÷ 6	2000 2000 2000 2000 2000 2000	esocretorista continuos conti		4580504455446446446446464
② 28 ÷ 5	8*****************	hembud dhidahe daga dapa upa upa u	# \$\dagger\$ = = \dagger\$ # \$\dagger\$ # \$\d	474-70-70-70-70-70-6-6-6-5-70-70
@ 16 ÷ 3	\$7+77+7777034A70A874D	www.m.m.m.m.m.m.m.m.m.m.m.m.m.m.m.m.m.m		
9 15 ÷ 2	VP1V4347V0VV030E3242443AD	经收款 化混合物 化氯化 化氯化 医乳化液溶液 化复元化 医克尔特氏病		

The swimming team will take a bus to go to the Swimming
competition. Each bus accommodates 40 students. 60 students
will attend this competition.
How many buses are required to accommodate all students?
Will there be empty seats? And how many?

Ans	wer:
	40 At 4400 Manufacture (100 Manufacture

3	There are 48 mugs that need to be boxed and shipped.
	Each box holds five cups.
	How many boxes are needed to ship the cups?
Ans	wer:

	MAGNETIC CONTROL TO A 1911 - 1924 - 1

usaun

allum and Fere value in Livision

Dividing Multiples of 10, 100, 1,000 by a 1-digit-number

When dividing multiples of (1), 1.00, 1,000 by a one-digit-number, we do the following:

xample: Divide:

Answer:

(a) To divide 400 ÷ 5, We note that: $5 \times 8 = 40$

So,
$$5 \times 80 = 400$$

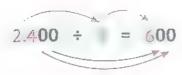
So,
$$400 \div 5 = 80$$

(i) To divide 2,400 ÷ 4,

We note that:
$$4 \times 6 = 24$$

So,
$$2400 \div 4 = 600$$





Complete the following table: (As in the example):

	Equation	Related Fact	Quotient
(Ex.	8,000 ÷ 4	8 ÷ 4 = 2	200
4	4,500 ÷ 9	ATT-0-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	4001-001-0000-0000-0000-0000-0000-000-00
(3)	15,000 ÷ 5		
0	8,000 ÷ 4		
0	8,000 ÷ 4	42-25-10-10-10-10-10-10-10-10-10-10-10-10-10-	

2	Find the quotient:	
(a 2,400 ÷ 8 =	3 2,000 ÷ 4 =
(© 10,000 ÷ 5 =	3 ,000 ÷ 6 =
3	am, and they all want to g	go to work on Monday morning at 7:00 go by metro. Each metro train consists of ommodates 90 persons, can all workers
		as using numbers, words, and symbols.
4	store. He read that he wo	falafel. He bought 360 beans from the buld need 6 beans for each falafel patty can he make with all the beans?
5	There are 540 colored per asked to put 9 crayons i	encils in a large basket. The pupils were n a small box for each pupil. How many ls need to complete this task?

:IsGON

Area Mudel and Division

Rectangle Area Model Strategy for Representing and Solving Division Problems

This strategy can be understood through the following examples.



FISH

Draw a long rectangle and write "5" to the right side of the rectangle.

Second:

Draw a vertical line inside the rectangle and write in the left part "5 x 10 = 50" (as the divisor is two digits) And write under this part "10".

A Milital

By subtracting 96 (the dividend) -50 = 46. Divide $46 \div 5 = 9$ and the remainder is 1.

in the remaining part of the rectangle and write "?" under this part of the rectangle.

o Foldado

Adding 9 + 10 = 19 (Quotient).

 \Rightarrow : 96 ÷ 5 = 19 and the remainder: 1

The solution can be verified by multiplying the numbers outside of the division by the divisor and then adding the remainder, if any, to get the dividend.

Verification

 $19 \times 5 = 95$, 95 + 1 = 96 (the dividend).

ample (2): Using the Rectangle Area Model to divide 919 ÷ 8

4 X 200 = **800** 4 X 20 = **80** 4 X 9 = **36**

Hundreds: There is 9 in the Hundreds place = 900

9 hundreds \div 4 = 2 hundreds.

The related fact is $4 \times 200 = 800$.

The remainder = 919 - 800 = 119

Tens: $4 \times 10 = 40$.

40 is much smaller than 119

$$4 \times 30 = 120$$
,

120 is more than 119.

So. 80 is the closest value to 119.

$$119 - 80 = 39$$
.

Ones: $3 \times 9 = 36$.

39 is the closest value to 39.

$$39 - 36 = 3$$

(3 is the remainder)

The quotient = 200 + 20 + 9 = 229

919 ÷ 4 = 229 and the remainder is 3

lanticulien.

 $229 \times 4 = 916$, 916 + 3 = 919 (the dividend).

= ຂໍເມນ ແລະ ໄປ : . ຮາລວ ໂລວ Rectangle Area Model to divide 156 ÷ 6

Hundreds: You can't use $6 \times 100 = 600$.

Because: 600 > 156.

Tens: $6 \times 10 = 60$.

60 is much smaller than 150.

$$6 \times 30 = 180$$
,

180 is more than 150.

So. 120 is the closest value to 156.

156 - 120 = 36.

Ones: 6 X 6 = 36.

$$36 - 36 = 0$$
.

(No remainder)

$$156 \div 6 = 26$$

$26 \times 6 = 156$ (the dividend).

Find the quotient in each of the following:

(Use the Area of Rectangle Model)

@ 84 ÷ 6

 \bullet 90 ÷ 4

120 + 36 = 156

20 + 6 = 26 (Quotient)

 $6 \times 6 = 36$

 $6 \times 20 = 120$

90 ÷ 4 = _____

	② 457 ÷ 3 =
	b
	3 ,200 ÷ 8 =
	3,200 ÷ 8 =
2	Sarah saved 868 coins last year. She wanted to put them in 8 pots
	How many coins will she put in each pot?
	How many coins will she put in each pot? (Use the Rectangle Area Model to solve, show your steps)
	·
	·
	·
3	·
3	(Use the Rectangle Area Model to solve, show your steps)
3	(Use the Rectangle Area Model to solve, show your steps) There are 492 cars that need to use the parking lot in the stadium.
3	(Use the Rectangle Area Model to solve, show your steps) There are 492 cars that need to use the parking lot in the stadium. The stadium includes 4 parking spaces. Each parking lot must
3	(Use the Rectangle Area Model to solve, show your steps) There are 492 cars that need to use the parking lot in the stadium. The stadium includes 4 parking spaces. Each parking lot must contain the same number of cars evenly.
3	(Use the Rectangle Area Model to solve, show your steps) There are 492 cars that need to use the parking lot in the stadium. The stadium includes 4 parking spaces. Each parking lot must contain the same number of cars evenly. How many cars are there in each parking lot?

Ars-on (K)

The Statut Challenth Agorithm

The Partial Quotient Algorithm:

Bample [] | (3 to 7 ÷ 4

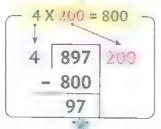
-01

Draw the line as shown in the figure. Then, write the dividend on the bottom and the divisor on the left.



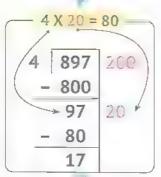
-02

Start from the left, there are 8 in the Hundreds place. Notice that 800 is a multiple of 4, (4 x 200 = 800). Write 200 to the right of the line as shown. Then write 800 under 897, then subtract.



-- 3

Move to number 79 (the difference). Find the nearest multiple of 4 to 97 (4 x 20 = 80); we can use another number. Write 20 to the right of the line, write 80 below 97, then subtract.



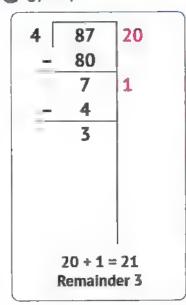
-04

We move to number 17 (the difference). The nearest multiple of 4 to 17 is 16 (4 \times 4 = 16). Write 4 to the right of the line, write 16 under 17, then subtract.

The quotient = 200 + 20 + 4 = 224

So, $897 \div 4 = 224$ and the remainder is 1.

Example (2): Divide:



$$87 \div 4 = 21$$
 and the remainder is 3

Verification:

$$4 \times 21 = 84$$
, $84 + 3 = 87$

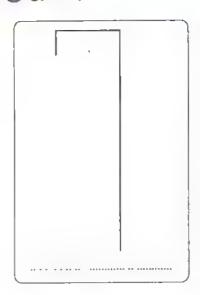
$$675 \div 5 = 135$$

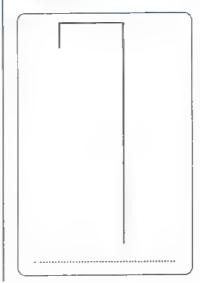
Verification:

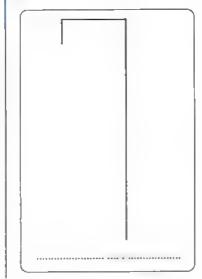
$$5 \times 135 = 675$$

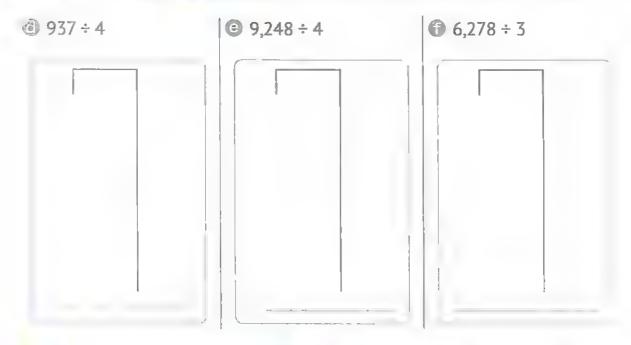
Verification:

1 Use the Partial Quotient Algorithm to divide:









A juice shop owner owns 480 cups. If the shop owner wants to use these cups for 3 months, how many cups should he use each month? (Using the Partial Quotient Algorithm)

One machine was used to make 1,026 cans of sugar-free soda and Jumes that number of regular soda cans over the course of _____ The regular soda cans were then placed in two shipping boxes, each containing the same number of soda cans. How many cans of regular soda are there in each shipping box?



The Standard Division Algorithm

Estimate Quotients

To estimate the quotient:

- We look for two numbers between which the dividend is limited and which are a multiple of the divisor.
- We divide each of the two numbers by the divisor, so that the result of the division is limited to the quotient of the division of the two numbers.

ample (1): _

To estimate the quotient of 68 ÷ 4.

The number 68 is between 40 and 80. (Since these two numbers are multiples of 4) $80 \div 4 = 20$ $40 \div 4 = 10$

The quotient is between 10 and 20.

xample (2):

To estimate the quotient of $752 \div 3$.

The number 752 is between 600 and 900. (Since these two numbers are multiples of 3) $600 \div 3 = 200$ $900 \div 3 = 300$

The quotient is between 200 and 300.

$$600 \div 3 = 200$$

$$752 \div 3 = ??$$

$$900 \div 3 = 300$$

ample (3):

To estimate the quotient of $6,245 \div 2$.

The number 6,245 is between 6,000 and 8,000 (Since these two numbers are multiples of 2)

$$6,000 \div 2 = 3,000$$

$$8.000 \div 2 = 4.000$$

$$8,000 \div 2 = 4,000 \times 8,000 \div 2 = 4,000$$

The quotient is between 3,000 and 4,000.

Complete the following table:

	Problem	The dividend is between	The quotient is between
Ex.	45 ÷ 3	30 and 60	10 and 20
3	75 ÷ 3	and	and
(5)	845 ÷ 3	and	and
(3)	215 ÷ 4	and	and .
ő	4,256 ÷ 2	and	and
,ġ)	5,487 ÷ 4	and	and

The Standard Division Algorithm:

ample (1): Divide 98 ÷ 4:

े ही ना कामना प्राप्तिक है। वह को विवाद की

The is written is written in the line and the divisor is written to the left of the division symbol.

57=1.401:12 51 =1

Start with the number in the place with the ideaes value (on the left). You know that $9 \div 4 = 2$ and the remainder of the division is 1.

- Write the number above the line, above number 9.
- The remainder of the division will not be recorded this time.

Tomas Smale Wildingfoll carmany

- The value of the number 2 is 20 because it is in the Tens place.
- Multiply 20 x 4 = 80, then write 80 below 98.
- Since 80 is part of the dividend you divided.

Fourth Step (Subtraction)

Subtract:

$$98 - 80 = 18$$

Write the result of the subtraction.

Fifth Step: (Division):

- The number 18 is the new divisor.
- $18 \div 4 = 4$ and the remainder is 2.
- Write 4 over 8 in the Ones place.

Sixth Step: [Multiplication]:

Multiply $4 \times 4 = 16$. Write 16 under 18.

Seventh Step: (Subtraction):

So: $98 \div 4 = 24$ and the remainder is 2

From above we note that:

There are three basic steps:

(Division ⇒ Multiplication ⇒ Subtraction)

 These three steps are repeated according to the number of digits of the dividend.

Example (2): Divide 858 ÷ 3:

First Step (Writing the problem)

3 858



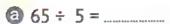
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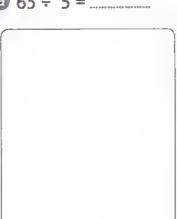
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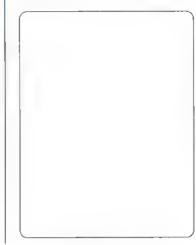
Turnie Signe Signore stee Joins

Divide using the Standard Division Algorithm:



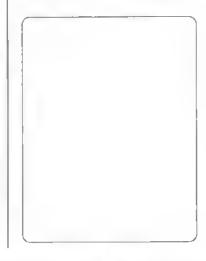












2 The train has 784 passenger seats. If the train has 8 cars and each car has the same number of seats, how many passengers can be seated in each car?

(Solve the problem using at least two different strategies)



Follow the Standard Division Algorithm:

(1): Divide 985 ÷ 4:

(Using the Standard Division Algorithm)

The quotient will be between 200 and 300.

#b⊯een 800 and 1,200)

- Follow the division steps:
 Start by writing the problem, then (divide multiply subtract).
- These last three steps are repeated according to the dividend.

Check 246 x 4 = 984 , 984 + 1 = 985

18 ÷ 4 = 4 Remainder 2					
9 ÷ 4 = 2 Remainder 1		25 ÷ 4 = 6 Remainder 1			
	-246-				
4	985				
4 X 200 → -	800				
	185				
4 X 40 →-	160				
	2.5				
4 X 6 →-	24				
	1				

Example (2): Divide 296 ÷ 4:

(Using the Standard Division Algorithm)

The quotient will be between 0 and 100.

(Because the divisor is between 0 and 400)

- Note that: When dividing 2 ÷ 4, division is not possible because 2 < 4. So: We divide 2 and 9 together (29 ÷ 4)
- Note that: If the division is not possible, we add the number that cannot be divided to the next number.

Note that: 0 is written above the number that cannot be divided.

Check 74 x 4 = 296

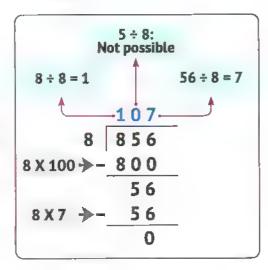
Example (3): Divide 856 ÷ 8:

(Using the Standard Division Algorithm)

The guotient will be between 100 and 200.

(Because the divisor is between 800 and 1,600)

Note that: When dividing 5 ÷ 8,
 division is not possible because 5 < 8.
 So: We divide 5 and 6 together (56 ÷ 8).



 Note that: The number of digits of the quotient may be equal to or less than the number of digits of the dividend.

Example (4):

7,856 ÷ 5 → Number of digits of the quotient is 4 digits.

 $2,364 \div 5$ \longrightarrow Number of digits of the quotient is **3** digits.

Because: 2 ÷ 5 is not possible.

1 Complete the following table:

	Problem	Number of Digits of Quotient	The Quotient is between	Using the Standard Division Algorithm
Ex.	452 ÷ 4	3	100 and 200	113 4 452 - 400 52 - 40 12 - 12 0

Ex.	278 ÷ 6	2	0 and 100	046 6 278 - 240 38 - 36 2
(E)	845 ÷ 5	**************************************	and	
Ô	396 ÷ 6	HE house he counted thouse and hope before a comp	and .	
©	4,256 ÷ 7		and	
(3)	4,824 ÷ 8	***************************************	and	

2	Estimate the quotient and determine the number of digits of the
	quotient, then solve each problem using the Standard
	Division Algorithm:

a	576 ÷ 3 =
	Number of digits of the quotient
	is
	The quotient will be between
	and

O	558 ÷ 6 =
	Number of digits of the quotient
	is
	The quotient will be between
	and

3	Kazem wants to travel from Cairo to Alexandria. The distance
	between the two cities is 219 km. Kazem plans to stop 3 times
	during his journey. After how many kilometers should he stop?
	AMBARIAN
	NINDING

rigina Mary Problems

Three-time Reading Strategy to Solve Word Problems:

Determine what nappens in the problem. First read

Determine the **. ** in the problem. Second read

Determine the questions that can be asked in the problem. Third read

xample:

Ahmed and his mother want to plant a garden, and they will buy I tomato seedlings, Carrot seedlings, and beet seedlings. They want to put the seedlings in rows. How many seedlings are there in each row?

the retroving question:

What happens in the problem?

There are a number of different seedlings that we want to divide into 6 rows.

What are the values in the problem?

seedlings, seedlings, beet seedlings, rows.

What questions can be asked in this problem?

What is the sum of the seedlings? How many seedlings are there in each row?

Answer:

- Total seedlings = 35 + 16 + 9 = 60 seedlings.
- Number of seedlings in each row = 60 ÷ 6 = 10 seedlings.

1 In 20 weeks, Sarah collected 14 kilograms of metal cans for
recycling. Salim collected 6 times what Sarah collected.
The cans should be put into bags to be taken to the recycling
center. Each bag holds 7 kg of cans. How many bags do they need?
What happens in the problem?
What are the values in the problem?
What questions can be asked in this problem?
Answer:
**** * ******* * * * ******* * * * **** *
2 Hadi owns 347 small glass balls. Kamal owns 4 times as much
2 Hadi owns 347 small glass balls. Kamal owns 4 times as much as Hadi. Hala has 799 less than Kamal. How many glass balls
2 Hadi owns 347 small glass balls. Kamal owns 4 times as much as Hadi. Hala has 799 less than Kamal. How many glass balls does Hala have?
2 Hadi owns 347 small glass balls. Kamal owns 4 times as much as Hadi. Hala has 799 less than Kamal. How many glass balls does Hala have? What happens in the problem?
2 Hadi owns 347 small glass balls. Kamal owns 4 times as much as Hadi. Hala has 799 less than Kamal. How many glass balls does Hala have? What happens in the problem? What are the values in the problem?
2 Hadi owns 347 small glass balls. Kamal owns 4 times as much as Hadi. Hala has 799 less than Kamal. How many glass balls does Hala have? What happens in the problem? What are the values in the problem? What questions can be asked in this problem?
2 Hadi owns 347 small glass balls. Kamal owns 4 times as much as Hadi. Hala has 799 less than Kamal. How many glass balls does Hala have? What happens in the problem? What are the values in the problem? What questions can be asked in this problem?
2 Hadi owns 347 small glass balls. Kamal owns 4 times as much as Hadi. Hala has 799 less than Kamal. How many glass balls does Hala have? What happens in the problem? What are the values in the problem? What questions can be asked in this problem? Answer:

Yahya placed 21 bottles of paint equally on 3 tables. How man bottles of paint did he put on each table?
What happens in the problem?
What are the values in the problem?
What guestions can be asked in this problem?
Answer:
Noor read 6.4 bages of a book in one month. His sister read where times as many pages as Nour in the same month. How many pages did Noor and his sister read altogether? What happens in the problem? What are the values in the problem? What questions can be asked in this problem? Answer:





Problem-Solving Strategies

Learning Objectives;

At the end of this lesson, the student will be able to:

 Apply strategies to solve addition, subtraction, multiplication, and division problems.



Which Comes First?

Learning Objectives:

By the end of this lesson, the student will be able to:

 Use the order of operations to solve two-operation problems.



By the end of this lesson, the student will be able to:

Use the order of operations to solve equations that require more than one operation.



The Order of Operations and Story Problems

Learning Objectives:

By the end of this lesson, the student will be able to:

- . Use the order of operations to solve equations that require more than one operation.
- . Write an equation and solve it to represent a multi-step word problem.

Cancepl 31 Order of Operations

Lesson

Inde medium Strategies

second You studied the strategies of Mental Adminimental and

strategies of Addition and Subtraction.

seventh : You studied the strategies of multiplication and civisie.

«Remember these strategies»

Solve the following problems using any strategy you choose. Explain your steps:

(a) 349 + 199 = _____

5 9,230 – 455 = _____

678 ÷ 6 =

2 Estimate the solution of each problem and then use the appropriate strategy to solve: (Show your steps)

a	1,892 +	3,267	=	\$65m4 \$ \$70 1 10 10 10 10 10 10 10 10 10 10 10 10
	Estimati	0.01		

0	5,612 - 56 =	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
	Estimation:	

3 Solve the following problems using the Standard Algorithm:

G		48	()		***********
	X	32		5	745

	+	***************			
		4040 4140544 64 541 446			

Lesson

Which Comes First?

Order of Operations Diagram

Parentheses

Exponents

Multiplication and Division (From less to right)

Addition and Subtraction (From left to right)

Problems that contain Action and Submittion only:

When a problem contains only addition and subtraction.

We perform operations from left to right.

Problems that contain accept de atom and di islott only:

- When a problem contains only multiplication and division.
- We perform operations from left to right.

$$\begin{array}{rcl}
 & 3: & 24 \div 8 \times 2 \\
 & = & 3 \times 2 \\
 & = & 6
\end{array}$$

Thing

Problems that contain two operations:

- One of them is multiplication or division, and the other is addition or subtraction:
 - When a problem contains more than one operation, multiplication and division must be done before addition and subtraction.

5 + 3 X 4	7 X 2 + 4	9 ÷ 3 + 6	3 + 6 ÷ 3
= 5 + 12	= 14 + 4	= 3 + 6	= 3 + 2
= 17	= 18	= 9	= 5
9 - 4 X 2 = 9 - 8 = 1	5 X 3 - 7 = 15 - 7 = 8	$8 \div 4 - 2$ $= 2 - 2$ $= 0$	$9 - 6 \div 2$ $= 9 - 3$ $= 6$

1 Follow the order of calculations to solve the following problems:

	1				
а	12 + 2 + 8	•	12 - 5 - 2	G	9 + 8 - 2
	=		=		=
	=		=		±
a	12 - 2 + 5	e	24 ÷ 6 ÷ 4	0	5 X 6 X 3
	=		= ,		= , , , , , , , , , , , , , , , , , , ,
	=		=,,		=
9	9 X 4 ÷ 6	0	24 ÷ 8 X 4	0	5 X 4 + 3
	=		=		= ,
	=		=		=
		•			

9	32 ÷ 8 + 5	(3)	5 + 20 ÷ 4	0	6+6X2
	=		=		=
	_		-		=
(i)	16 ÷ 2 - 7	0	16 - 8 ÷ 4	Ö	8 - 2 X 3
	=		=		=
	***		=		=
(0)	2 X 8 - 6	0	6+5-3-2	0	6 X 5 ÷ 3 ÷ 2

The Total To puzzles using the comediant of the

- Three equal shapes whose sum is (15).

Example (2): If
$$\times X \times X \times = 27$$

- 27 = 3 X 3 X 3. So: $\times = 27$

Rample (3): Solve the following puzzle. When you know the number each picture represents, write the value above the picture. Remember the order of operations.

$$+ = 36$$
 $+ = 28$
 $+ = 44$
 $+ = 44$

- To solve the previous puzzle, we must first look for the key to this puzzle:

The first line:

Three equal shapes whose sum is (36), by dividing 36 ÷ 3 = 12.

This means that the figure = 12 and that: = 6

· ·

+ ₩ x = 28 The second line:

- Put the number 6 in the place of the figure \(\infty\) \(\frac{1}{2}\) \(\frac{1}2\) \(\frac{1}{2
- By doing multiplication first and then adding:

- Put the number 4 in the place of the figure 4 X + 4 = 44
- And this line can be written as follows: 4 X + 4 = 40 + 4
- This means: 4 X (1) = 40

So: 📤 = 10

The fourth line: * + 1 x = =

- Put the number 6 in the place of the figure =
- Put the number 10 in the place of the figure (1).

$$+ \frac{1}{10} \times = 4 \times 2 + 10 \times 6$$

= 8 + 60 = 68



and

Solve the following puzzles. When you know the number each picture represents, write the value above the picture. Remember the order of operations:

= 12

$$+$$
 x \bigcirc = 28



Order of Operations

Order of Operations Diagram

Parentheses	>	Exponents	> M
-------------	-------------	-----------	-----

Multiplication and Division (From left to right)

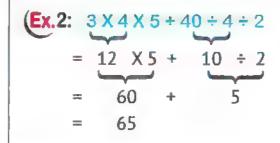
Addition and Subtraction (From left to right)

- Problems with more than one operation:
- If the problem contains more than one operation:
 Multiplication and division must be done before addition and subtraction.
 Then add and subtract from left to right.

(Ex.1:
$$30 \div 5 + 4 \times 7 + 2 \times 6$$
)
$$= 6 + 28 + 12$$

$$= 34 + 12$$

$$= 46$$



Follow the order of calculations to solve the problems:

а	2 + 4 X 6 =	0	48 ÷ 4 + 9 =	G	6 X 3 - 3 X 5 =
(3)	7 + 70 ÷ 10 - 2 =	6	49 - 7 X 6 + 4 =	0	8 X 2 + 24 - 12 =
9	8 X 3 + 6 ÷ 2 =	0	21 ÷ 3 – 2 X 3	0	25 ÷ 5 + 30 ÷ 3 =

Lesson

The Order of Operations and Story P

Order of Operations Diagram

Pare	mtheses Exponents (From left to right) Addition and Subtraction (From left to right)
	Stuff to the series of the ser
	Adel loves chocolate. He received 248 pars of chocolate for his
	birthday. He ate 💹 bars of chocolate and wants to give the rest
	to of his friends. How many bars of chocolate would each friend
	have if they divided them equally?
2	Maha walked 14 mometers every day for two weeks.
	The following week, Maha walked 56 kilometers.
	How many kilometers did she walk during those three weeks?
	* * * * * * * * * * * * * * * * * * * *

3	Ashraf must take the bus to go to work. It takes 27 minutes to reach the bus stop near his works place. After that, he has to walk for 12 minutes from the bus stop to his workplace. How many minutes does Ashraf spend on his way to work 5 days a week?
4	A group of tourists is on a tour in Alexandria. The group includes 172
	tourists and 8 tour guides who want to travel to visit the pyramids by microbus. Each microbus can accommodate 9 persons. How many microbuses do they need so that everyone can reach the pyramids?
5	Nashwa wants to bake blueberry pancakes. She will put 6 berries
	in each pancake. Nashwa bought 198 berries from the store. On
	her way home, Nashwa ate 18 berries. How many pancakes can Neshwa bake with the remaining berries?
C	Write a word problem that can be represented by the equation:
0	$6 \div 36 \div 4$.
	•



By: Mohamed Nasreldin

Exercises Book



Number Sense and Operations

Unit 1 Place Value

Reinforcing Place Value

on Lessons 182

Lightumbers!

Complete the following table by putting a tick () as shown in the example.

		Digit	Number	Numeral
(Ex.	25	pasyanya, 4 manyawan manya nini \$44.	1	1
(3)	8	01000000000000000000000000000000000000		
(3)	125			
19	Eight		# # # * * * * * * * * * * * * * * * * *	
1	Two hundred fifteen			
3	3		4 401-000-011-011-011-011-01-01-01-01-01-01	
(i)	45		\$4.40244MAMAMANANANANANANANANANANANANANANANANA	~02=0~40+0140+0*1919
0)	200 + 5	A 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$+\$0\$	

Write the	and the savetest numbers that can be	formed
from the following	digits.	

- (6,8,7,2,9) The greatest number is: - The smallest number is:
- (0 (2,0,8,3,4) The greatest number is:
 - The smallest number is: ...
- (6,1,9,3,4) The greatest number is:. - The smallest number is:

(8,0,2,7,5)	- The greatest number is:
	- The smallest number is:

3 Complete the following table (Write the place value and the value of the digit 8 in each number):

	Number	Place Value	Value
a	422,485	,	
0	38,250	######################################	
0	8 3,115	***************************************	[0] [0] [0] [0] [0] [0] [0] [0] [0] [0]
0	700,810		a-ad-dy-toptobarosis-rootophy-a-ad-a-a-a-a-a-a-a-a-a-a-a-a-a-a-a-a-a
0	415,128	***************************************	\$0.000 m.b.m.d.c.c.c.c.c.c.c.c.c.c.c.c.c.c.c.c.c.c
0	820,200	**************************************	
9	210,682		

4	Complete	using	(-	۲,	=	or	>):

452.252	,
----------------	---

542,252

6 25,225

25,252

600,060

10,000

9,999

20,850

1 900,900

99,999

5 Use the following Place Value table to read the shown number:

a	Billions (Milliards)	Millions			Thousands			Ones		
	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
				8	1	0	4	2	8	8
			Millic	ns	T	housa	ınds	*** * * ********		*** •

_	The p	previous	number	is read	as:	8 • • • • • • • • • • • • • • • • • • •
	4+bar r ran 1		/////// 4 vb mm m vrvm			**** *** ****** ** * * * * * * * * * * *

(e)	Billions (Milliards)	Millions			Thousands		Ones			
	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
			4	3	1	8	0	0	0	5
			Milli	ons	τ	hous	ands			

– The	previous	number	is re	ead	S: ,
-------	----------	--------	-------	-----	------

(3)	Billions (Milliards)	Millions			Thousands			Ones		
	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
		5	1	8	1	2	9	2	0	8
			Millio	ons	Thousands					

- The previous number is read as:

3	Billions (Milliards)	Millions			Thousands			· Mar		
	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
	5	0 0		2	4	0	3	7	5	0
		Millions			Thousands					

- The previous number is read as: ...

(3)	Billions (Milliards)	Millions			Thousands			Ones		
	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
	7	3	6	5	4	2	9	9	6	8
		****	Millie	วกร	Т	hous	ands			

- The previous number is read as:

6 Write the following numbers in digits: (Standard Form):

- 25 Millions + 250 Thousands + 200 =
- **3** 300 Millions + 5 thousands + 3 =
- **@** 600 Millions + 200 Thousands + 3 =
- Billions + 6 Millions + 4 Thousands + 4 =
- 9 Billions + 25 Millions + 125 Thousands + 225 =

7 Complete the following numbers:

- 456,254 = _____ Thousands + _____
- **6** 7,024,258 = Millions + Thousands +
- © 14,105 = Thousands +
- **3** 9,005,002= Millions + Thousands +
- **②** 23,015 = Thousands +
- **1** 7,000,021 = _____ Millions + ____ Thousands + ____

8 Complete the following table:

	Number	The Place in Which the Number 4 is Located
0	227,102,245	
0	13,247,258	
0	4,127,578	
0	225,124	
0	2,415,220	
0	6,125,200,482	
0	248,367,250	
Θ	4,000,000,525	

10	5,400,300,200	·
1	24,100,000	

Circle the number in the place shown in front of it:

	Number	The Place in Which the Number is Located
(a)	528,745,432	Ones
(5)	789,654,026	Hundreds
(3)	427,167,523	Thousands
	210,347,163	Millions
	793,400,063	Ten-thousands
9,5	7,463,814,325	Billions
50)	9,521,005,136	Hundred-millions
43	8,852,963,852	Ten-millions
動	520,753,159	Hundred-thousands
90	8,201,093	Ten

10 Complete the following:

- (a) The largest 5-digit-number is
- The largest 6-different-digit-number is
- The smallest 6-different-digit-number is
- The value of the digit 6 in the number 126,251 is
- The value of the digit 3 in the number 32,105 is
- The place value of the digit 0 in the number 120,213 is
- The place value of the digit 4 in the number 10,214 is

	The largest number that can be formed from the digits: (5, 6, 3, 8, 2) is
	The smallest number that can be formed from the digits: (5, 0, 7, 3, 1) is
•	The Largest 5-digit-number that can be formed from the digits: (3, 7, 2) is
	The smallest 6-digit-number that can be formed from the digits: (6, 8, 4
0	0 450 Millions + 50 Thousands =
0	25 Millions + 20 =
(40,002,200 = Thousands + Millions + Millions +
0	7,458,115,251 = Billions + Millions +
0	The number 77,002,205 is read as:
1	The number "Three hundred five million, fourteen thousand, seven" is
	written as: (Standard Form)
8	The digit 3 in the number 36,154,258 is in theplace.
t	The digit 8 in the number 45,185,252 is in theplace.
Œ	The digit in the number 7,335,102,562 is in the Billions
	place.
V	The digit in the number 922,157,528 is in the
	Hundred-millions place.

Choose the	e correct	answer	from	the	brackets:
------------	-----------	--------	------	-----	-----------

² The	is an amount relate	d to the numeral and	consists of one
or more	digits.		
		(number @ digit @ r	numerical form)
⑤ The	is writing the numb	er in any way.	
		(number 🎯 digit 🐠 ı	numerical form)
(represents a digit.	(3	15 @ 9 @ Eight)
o'	represents a number	er. (Two hundred fifty	200 + 5 - 29)
The larg	est 4-digit-number is	egargandaumtassassassassas 4	
		(9,999 @	9,000 @ 1,000)
The sma	llest 5-digit-number is	population to the total and the state of the	
		. (99,999 💿 1	0,000 @10,234)
g' The larg	est 5-different-digit-num	ber is .	
		(98,765 🐠 1	0,234 @10,000)
The sma	allest 4-different-digit-nu	mber is	
		(9,876	1,023 (01,000)
The val	ue of the digit 7 in the nu	mber 125,357 is	
			(7 @ 70 @ 700)
• The val	ue of the digit 0 in the nu	mber 87, 0 51 is .	
			(0 10 100)
① The pla	ce value of the digit 8 in	the number 15,3 8 2 is	
		(Ones @T	ens 🌣 Hundreds)
The pla	ice value of the digit 7 in	the number 7 25,145 i	s .
	(Thousands	Ten-thousands Hur	ndred-thousands)

\odot The largest number that can be formed from the digits: $(8, 6, 1, 7, 9)$ is
(98,761 @ 16,789 @ 97,168)
The smallest number that can be formed from digits: (0, 8, 1, 4, 5) is
(85,510 @ 10,458 @ 85,410)
• The largest 6-digit-number that can be formed from the digits: (9, 1, 7)
is (971,971 o 999,971 o 111,179)
The smallest 5-digit-number that can be formed from the digits (8, 2,
6) is (22,268 @ 88,862 @ 20,068)
9 12 Millions + 15 Thousands + 20 =
(20,015,012 💿 121,520 💿 12,015,020)
5 Billions + 3 Millions + 45 Thousands + 9 =
(5,003,045,009
S 3,400,003,025 =
(3 Billions + 400 Millions + 300 Thousands + 25 @ 3 Billions + 4 Millions +
3 Thousands + 25 @ 3 Billions + 400 Millions + 3 Thousands + 25)
1 Four billion, six hundred five million, ninety thousand, fifteen
=
O Six billion, five hundred thousand, thirty =
(6,000,500,030 @ 6,500,000,030 @ 6,500,000,300)
The digit 8 in the number 214,284,697 is in the place.
(Tens or Ten-thousands or Ten-millions)
The digit in the number 745,215,369 is in the
Hundred-thousands place. (3 @ 2 @ 7)

Worksheet 🗾

f	Complete the follow	ving:	
	The number that rep	resents the numeral "three hundred an	d
	seventeen" is	4	
	The value of the digi	it 3 in the number 2 3 4,542,124 is	
	The largest 6-digit-n	number is	
	The billion is the sm	allest number formed from .	digits
	All digits are	and all numbers are not	· arvalustuda-yddudapaadagapag
	Choose the correct	answer from the brackets:	
	(a) "8" represents	Pakid Abushingungan (4.44-4), 644- II	
	(digit only di	git and number only digit, number ar	nd numeral)
	 The place value of the 	ne digit 0 in the number 3 0 ,745 is	
		(Thousands Ten-thousa	nds Zero)
	The smallest 5-differ	rent-digit-number is	
		(10,000 @ 90,000	
	The largest number	that can be formed from the digits: (2, 7	
	(Ö) FOO . O . 25	(70,321 @ 73,210	
	(a) 500 + 0 + 25 =	(500,025 @ 5,	025 @ 525)
3	Complete using (<	, = or >):	
	⑤ 54,205	45,250 (5) 25,000 2	00,005
	© 808,080	80,808	
	100,000	One hundred thousand	
	Arrange the followi	ng numbers in an a woo when order	
	100,100	, 99,999 , 990,000 , 10,000	
	The order:	, · , ,	

Exercises on Lessons 3&4

Changing Values & Comparing Values

1 Complete the following table, write the value and the place value of the underlined digit of the following numbers:

	Number	Place Value	Value
а	7,654,328,63 <u>8</u>		
0	9,654,104, <u>1</u> 03		
0	6,123,6 <u>8</u> 9,456		
0	5,00 <u>0</u> ,412,698		
е	<u>7</u> ,021,842,036		
ð	7,002,852,3 <u>6</u> 9		
9	9,852,147,633		
0	700, <u>5</u> 20,069		
0	405,039,506		
0	500,700,021		

2 Complete the following table:

	Digit	Place Value	Value
a	. 8	Ones	
0	6	Hundreds	
0	. 9		9,000

0;	3		300,000
ġ	7	Ten-millions	
49	2	Billions	
- P100 -	4	## 3 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	40
0	5	ADAR-1007777777774444444444447774477447744774	50,000
19)	1	Millions	
	6		600,000,000

Complete the following:

@ 30 Tens =	hardak di	50 Ten-thousands =	•
② 20 Ten-millions = .	\$ Fn E0-E070074nn gymmd hintrid opin - ₩	6 600 Ones =	
⊕ 700 Hundreds =			
300 Hundred-thou	ısands =		
@ 90 Millions =	ngg pagdanyadddd - M	(i) 100 Thousands =	h hay date dated the training training to the contract of the
.1. 5,000 =	Hundreds.	10,000 =	Thousands.
800,000 =	Ten-tho	usands.	
90,000 =	. Tens.	1,000,000,000 =	Millions

4 Complete the following:

⑤ 500 Tens =	. Thousands.
600 Thousands =	. Tens.
60 Ten-millions =	Hundreds.
① 1,000 Hundreds =	Thousands.
③ 3,000 Hundred-thousands =	Millions.
(f) 9,000 Millions =	Billions.
② 100 Thousands =	Ten-thousands.

5 Complete the following:
The place where the digit 8 is in a value 10 times the digit 8 in the
Ten-thousands place is
The place where the digit 7 is in a value 100 times the digit 7 in the
Ten-thousands place is
The place where the digit 3 is in a value 1,000 times the digit 3 in the
Tens place is
The place where the digit 6 is in a value 10 times the digit 6 in the
Millions place is
The value of the digit in the Ones place is times the
value of the digit in the Hundreds place.
The value of the digit in the Hundred-thousands place is
times the value of the digit in the Tens place.
The value of the digit in the Millions place is times the
value of the digit in the Thousands place.
The value of the digit in the Billions place is times the
value of the digit in the Millions place.
6 Complete the following:
a (8 Tens, 7 Ones) X 10 =
(6 Hundreds, 3 Ones) X 100 =
© (3 Hundreds, 5 Tens) X 10 =
G (7 Thousands, 2 Tens) X 100 =
(6 Thousands, 2 Hundreds) X 1,000 =
(4 Millions, 7 Hundreds) X 100 =
9 (9 Hundreds, 5 Tens, 3 Ones) X 10 =
(9 Thousands, 7 Hundreds, 2 Ones) X 100 =

1 (9 Hundreds , 5 Tens , 3 Ones) X 10 =
()	9 Hundred-thousands , 5 Ones) X 10 =
13 8	3 Hundreds X 100 =
01	.5 Thousands X 1,000 =
1009]	100 Millions X 10 =
7 C	omplete the following:
ia II T	he greatest and the smallest 7-digit-numbers are:
Т	he greatest number is
ī	he smallest number is
10 T	he greatest and the smallest 8-digit-numbers are:
T	he greatest number is
Ţ	he smallest number is
c]	he greatest and the smallest 9-digit-numbers are:
Т	he greatest number is
T	he smallest number is .
·ol T	he greatest and the smallest 10-digit-numbers are:
T	he greatest number is
Т	he smallest number is
= 7	he greatest and the smallest 7-different-digit-numbers are:
T	he greatest number is
T	he smallest number is
FIT	he greatest and the smallest 8-same-digit-numbers are:
Т	he greatest number is
T	he smallest number is
Ĉ.	he greatest and the smallest 9-different-digit-numbers are:
T	he greatest number is .

The smallest number is
The greatest and the smallest numbers formed from the digits:
(8,6,7,2,0,3,4) are:
The greatest number is
The smallest number is
1 The greatest and the smallest numbers formed from the digits:
(9,5,6,8,2,4) are:
The greatest number is
The smallest number is
• The greatest and the smallest 8-digit-numbers formed from the digits:
(9,2,4) are:
The greatest number is
The smallest number is
The greatest and the smallest 8-even-digit-numbers are:
The greatest number is
The smallest number is
The greatest and the smallest 8-odd-digit-numbers are:
The greatest number is
The smallest number is
Choose the correct answer from the brackets:
The value of the digit 8 in the number 36,815,250 is
(80,000 @ 800,000 @ 8,000,000)
The place value of the digit 7 in the number 33,128,275 is
(Tens Ten-thousands Hundred-thousands)
The value of the digit 6 in the Ten-thousands place is
(6,000 @ 60,000 @ 600,000)

The value of the digit	3 in the Hundred	d-millions place is
		(300 💿 300,000 💿 300,000,000)
60 Hundred-thousand	S = .	(60,000 @ 600,000 @ 6,000,000)
800 Thousands =	. Hundreds	. (8,000 @ 800 @ 80)
§ 4 Billions =	Ten thousands.	(4,000 @ 40,000 @ 400,000)
(i) 4,000 = Hu	indreds.	(4 1 40 40 400)
1 60,000 =T	housands.	(6 @ 60 @ 600)
₫ 200 Millions =		(200 200,000 200,000,000)
500 Tens =		(5,000 - 50,000 - 500,000)
1 Billion =	Millions.	(10,000 1,000 1,000,000)
100 The value of the digit	in the Ten-thous	ands place is 100 times the value
of the digit in the	place.	(Tens 😅 Hundreds 🎮 Thousands)
The value of the digi	t in the	place is 10 times the value of
the digit in the Hund	reds place.	
(T	housands 👵 Ten-	thousands in Hundred-thousands)
。 (7 Tens, 3 Ones) X 10	0 =	(7,300 @ 73,000 @ 730,000)
(3 Hundreds, 2 Tens)	X 1,000 =	paragrama B
		(32,000 @ 320,000 @ 3,200,000)
15 Millions X 100 =	and absorved property of the state of the st	
	(1,500,00	00 (15,000,000 (1,500,000,000)
· The value of the dig	it 3 in the numbe	er 9,2 3 7,468,258 is
	(3,000,000	000 @ 300,000,000 @ 30,000,000)
The smallest number	er formed from th	ne digits: (5,6,7,2,0,8) is
acce D		(876,250 @ 205,678 @ 678,205)
The number 200,00	0 = tir	nes the number 200.
		(100 1,000 10,000)

Worksheet 📳

Choose the correct	ct answer from the brackets:
The smallest numb	er formed from the digits: (5, 3, 7, 2, 0, 4)
is	(754,302 @ 754,320 @ 203,457)
The number 60,000	= times the number 600.
	(100 @ 1,000 @ 10,000)
The largest 7-similar	r-digits-number is
	(9,999,999 💿 1,111,111 💿 9,876,543)
25 Thousands x 1,00	00 =
	(25,000,000 @ 25,000 @ 250,000)
The place value of t	he digit 7 in the number 251,4 7 5,253
is	(Tens @ Ten-thousands @ Ten-millions)
2 Complete the follow	wing:
@ (4 Hundreds and 5 T	ens) x 100 =
The largest even nur	mber formed from 8 digits is
	in the Millions place is equal to times
the number in the Th	
400 Thousands =	
③ 800,000 =	len-thousands.
Match:	
1,000,000	The value of the digit 5 in Billions place.
2 9,876,543	The smallest 7-digit-number.
3 5,000,000,000	© 30 Ten-thousands.
4 2,500,000,000	The greatest 7-different-digit-number.
5 300,000	② 25 Millions X 100

Envisor on Language 5&6

Marie & Composing and Decomposing

7,200,150,208:	
400,300,200:	
1,500,000:	A-volation (17-00-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-
20,050,003:	·
4,000,000,000 + 6,000,000 + 20,000 + 300 + 20 + 6:	
2,000,000,000 + 30,000,000 + 700,000 + 600:	
200,000,000 + 700,000:	Ebstatamented by

2 Write the following numbers in the Standard Form:
a Five hundred million, twenty thousand, fifty:
6 Four billion, seven million, five thousand, nine:
G Eighteen million, ninety thousand:
One billion, five hundred twenty thousand, forty:
6 8,000,000,000 + 50,000,000 + 60,000 + 300 + 7 =
6 9,000,000,000 + 800,000 + 300 =
9 ,000,000,000 + 30,000,000 + 60,000 + 20 =
6 3,000,000,000 + 300,000 =
3 Write the Expanded Form of the following numbers:
a 400,120,603 = + + + + +
5 ,200,090,050 =
© 20,750,600 =
d 250,000,524 =
Six billion, eight hundred fifteen million, four hundred thousand, thirty =
***** *********************************
Nine billion, thirty-five million, nine hundred five thousand, three
hundred six =
One hundred ninety million, six hundred twenty-four thousand,
seventeen =
A Civer these williams for the day to the
Sixty-three million, five hundred ninety-seven =
• • • • • • • • • • • • • • • • • • • •
1910 - 1 - 1000 to - 1 - 1010 to - 1

4 Complete the following table:

	Standard Form	Word Form	Expanded Form
(3)	4,080,107,250		
(5)	4,000,125,695		
G	* b* 6)*********************************	Three hundred fifty million, nine hundred five thousand, two hundred fifty five	
0	**************************************	Three billion, six hundred million, seventy thousand, fifteen	
(4)	Idodes, to advance or try a by analyst a year a pag	# hr hv Alamaha Shafarang parkang karang paga - 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	700,000,000 ÷ 50,000 + 4,000 + 300 + 20 + 5
3	***************************************		7,000,000,000 + 200,000,000 + 4,000,000 + 30,000 + 200 + 90 + 3

5 Complete the following table:

	Composing Numbers (Expanded Form)	Decomposing Numbers (Expanded Notation)
		(3X)+(2X)
а	300,250,102	+ (5 X) + (1 X)
		+ (2 X)
•	7,050,000,865	
9	3,006,080,500	
		(2 X 1,000,000,000) + (9 X 10,000,000)
0	,	(8 X 100,000) + (7 X 1,000) + (3 X 100)
		+(7X10)+(1X6)
		(3 X 1,000,000,000) + (6 X 100,000,000)
8	<u> :</u>	+ (5 X 10,000) + (3 X 1,000) + (8 X 10)
		(2 X 100,000,000) + (5 X 10,000,000)
0		(6 X 1,000,000) + (9 X 1,000) + (4 X 100)
		+(8 x 10)+(3 X 1)

Use the Maide Value table to help you write the following numbers in different forms:

Billions (Milliards)	Millions			Thou	sand	S	Ones		
Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
8	0	0	7	2	0	6	0	5	9

(1)	Standard	Form:	4-6-7-5-4-1-6-6-5-1-1-6-1-1-6-1-1-6-1-1-1-1-1-1-1	
-----	----------	-------	---	--

- (2) Word Form:
- (3) Expanded Form:
- (4) Expanded Notation:

Billions (Milliards)	ons (Milliards) Millions			Thousands		5	Ones		
Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
	9	2	0	7	0	2	В	0	0

- (1) Standard Form:
- (2) Word Form: ..
- (3) Expanded Form:
- (4) Expanded Notation:

Billions (Milliards)	Mill	lions		Thou	sand	s	0	nes	
Ones	Hundreds	Tens	Ones	Hundreds	s Tens Ones		Hundreds Tens		Ones
		3	9	8	0	0	2	0	2
(1) Standard Form) <u></u>	glogia ngalis dia II y de madificiali II	одан үзү байшай т	z có z ó ó czó ó z ó ó ó ó ó ó ó ó ó ó ó	1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	advaren sesan			1017777114 6
(2) Word Form:	- addahii qobii qobii baqaa	6 4 7 8 7 7 4 7 7 4 7 7 4 7 7 7 4 7 7 7 4 7	P 전 명기업 20 업기업기 이 변경이 되는데 요.	p.4.4.3-3.3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3		泰德姓姓 电电子 化二甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	1食物益合物 电影等功能遗传片 表示可语分 多价值力。	g 表示型 施施 m 电-参 唱 播 泰學	all alludus de alle decres al relución de alludir d
					>***** 4****	* **** ** **			* ********
Billions (Milliards)	Mil	lions		Thou	sand	5	0		
Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
			2	8	9	0	1	0	5
(1) Standard Form	1:	151114717147		· • • • • • • • • • • • • • • • • • • •	= + + + + + + + + + + + + + + + + + + +	नोनोंन का बर्ट की पत्र मोपारी को वी कोनकी ब	48 8 8 8 7 7 P. J. L. B. W. L. L. W. L. W. L. W. L. W. L. L. W. L.	8 4 10 dr 4 11 12 14 14 14 14 14 14 14 14 14 14 14 14 14	sussuvburk A
(2) Word Form:	,	±========	9 4 4 4 49 40 10 4 10 4 10 4 10 4 10 10 10 10 10 10 10 10 10 10 10 10 10	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	y njugani ndagani ni ndaga di ndadi	9049435494 IA4	***************************************	10 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	化合物 医乳球体 经收益 医皮肤性炎
(3) Expanded For	m:	.,							
(4) Expanded Not	ation:		. abaavabe+1+1				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		. 1451+1++1+14
*************** * **** * * * * * * * * *	. 54 5 1 5 4 4 5 4 5 4 5 4 5 4 5 4 5 5 5 5		**!+4******	4/4014141401	4114141414144	1-14579			
C <mark>hoose the cor</mark>	rect ans	wer		4 14451414141	************				
Choose the corr The number 35,2				rd Form)	is	41-1		a P	
	00,810 (in th	e Wo						ı, two
	(1) Standard Form (2) Word Form: (3) Expanded Form (4) Expanded Not Billions (Milliards) Ones (1) Standard Form (2) Word Form: (3) Expanded Form	Ones Hundreds (1) Standard Form: (2) Word Form: (3) Expanded Form: (4) Expanded Notation: Billions (Milliards) Mill Ones Hundreds (1) Standard Form: (2) Word Form: (3) Expanded Form:	Ones Hundreds Tens (1) Standard Form: (2) Word Form: (3) Expanded Form: (4) Expanded Notation: Ones Hundreds Tens (1) Standard Form: (2) Word Form: (3) Expanded Form:	Ones Hundreds Tens Ones (1) Standard Form: (2) Word Form: (3) Expanded Form: (4) Expanded Notation: Billions (Milliards) Millions Ones Hundreds Tens Ones 2 (1) Standard Form: (2) Word Form: (3) Expanded Form:	Ones Hundreds Tens Ones Hundreds 3 9 8 (1) Standard Form: (2) Word Form: (3) Expanded Form: (4) Expanded Notation: Billions (Milliards) Millions Thou Ones Hundreds Tens Ones Hundreds 2 8 (1) Standard Form: (2) Word Form: (3) Expanded Form:	Ones Hundreds Tens Ones Hundreds Tens 3 9 8 0 (1) Standard Form: (2) Word Form: (3) Expanded Form: (4) Expanded Notation: Billions (Milliards) Millions Thousand Ones Hundreds Tens Ones Hundreds Tens 2 8 9 (1) Standard Form: (2) Word Form: (3) Expanded Form:	Ones Hundreds Tens Ones Hundreds Tens Ones 3 9 8 0 0 (1) Standard Form: (2) Word Form: (3) Expanded Form: (4) Expanded Notation: Ones Hundreds Tens Ones Hundreds Tens Ones 1 2 8 9 0 (1) Standard Form: (2) Word Form: (3) Expanded Form: (4) Expanded Notation:	Ones Hundreds Tens Ones Hundreds Tens Ones Hundreds 3 9 8 0 0 0 2 (1) Standard Form: (2) Word Form: (3) Expanded Form: (4) Expanded Notation: Billions (Milliards) Millions Thousands Ones Hundreds Tens Ones Hundreds 2 8 9 0 1 (1) Standard Form: (2) Word Form: (2) Word Form:	Ones Hundreds Tens Ones Hundreds Tens Ones Hundreds Tens 3 9 8 0 0 0 2 0 (1) Standard Form: (2) Word Form: (3) Expanded Form: (4) Expanded Notation: Billions (Milliards) Millions Thousands Ones Ones Hundreds Tens Ones Hundreds Tens Ones Hundreds Tens 2 8 9 0 1 0 (1) Standard Form: (2) Word Form:

```
800,000,000 + 7,000,000 + 50,000 + 300 + 2 =
   (in the Word Form) (807,050,302 Eight hundred and seven million,
   five hundred thousand, three hundred two - Eight hundred seventy
   million, fifty thousand, three hundred two)
Six hundred and fifty million, thirteen thousand, five hundred twenty-six
   (in Standard Form): .(605,130,516 • 605,013,516 • 650,013,526)
6 7.000,000,000 + 400,000,000 + 2,000 + 30 =
        (in Standard Form) (740,002,030 7,400,002,030 740,002,030)
                                                    (in Expanded Form)
(a) 150,000,230 : .....
   (100,000,000 + 5,000,000 + 200 + 30 - 10,000,000 + 50,000,000 + 200
   + 30 @ 100,000,000 + 50,000,000 + 200 + 30)
 8,000,000,000 + 20,000,000 + 800,000 + 2,000 + 80 =
                             (8,280,280 8,020,802,080 80,280,080)
 (6 X 1,000,000,000) + (6 X 10,000,000) + (6 X 10,000) + (6 X 100) +
                  . (6,060,060,660 4 660,060,660 6,660,000,660)
    (6 \times 10) =
 \bigcirc 3,000,000,000 + 50,000,000 + 12,000 + 245 =
                            (3.512.245 \odot 3.512,000,245 \odot 3,050,012,245)
    5,000,000,000 + 500,000,000 + 50,000 + 500 =
                        (5,000,550,500 - 5,500,050,500 - 5,550,000,500)
  Three hundred five million, seven hundred thousand, sixteen =
                             (350,700,016 @ 305,700,160 @ 305,700,016)
Five billion, six million, nine thousand, seven = _____
                       (5,006,009,007 = 5,060,090,070 = 5,600,900,700)
  (3 X 100,000,000) + (3 X 10,000,000) + (3 X 100,000) + (3 X 10,000)
    + (3 X 100) + (3 X 10) = .....
  (33 million , 33 thousand , 33 = 303 million , 303 thousand , 303 🕟
    330 million , 330 thousand , 330)
```

Worksheet 👸

1	Choose	the	correct	answer	from	the	brackets:
---	--------	-----	---------	--------	------	-----	-----------

The number 350,0	00,350:		(in Word Form)
(Three hundred fit	ty thousand, th	ree hundred fifty 🐠	Thirty-five million
three hundred fifty	o Three hund	red fifty million, thre	ee hundred fifty)
(4 X 1,000,000, 000	0) + (5 X 10,000),000) + (3 X 1,000,0	00) + (4 X 1,000)
+ (5 X 100) + (3 X :	1):		in Standard Form)
	(4,053,004,5	03 🐠 4,053,000,453	o 4,530,045,003)
Four hundred thirt	y-five million, f	our hundred thousa	nd, three hundred
five:			in Standard Form)
	(435,40	00,350 🍲 435,040,30)5 💿 435,400,305)
@ 200,000,000 + 60,0	000,000 + 20,00	00 + 6,000 + 20 + 6 :	A HA HA 5 HARDISONANNI II 4 7H HEIPPEILASSA &
(in Standard Form)	(206,2	06,206	26 🌀 26,026,206)
The value of the di	git 8 in the nur	mber 1 8 0,302,201 is	mayar directoridades a sax as accordances as a
	(8,000,8)	00,000 @ 800,000,0	00 @ 80,000,000)
Complete the follo	owing:		
The number 5,005,	050,500:		(in Word Form)
4,000,000,000 + 30	,000,000 + 900	,000 + 5,000 + 70	
) + (9 X	
+ (5 X			•

The place value o	of the dig	jit 3	in the	e numbei	80,2	2 3 4,2	56		
is If the digit 5 is in	the Mill	ions	place	e. its valu	e = (5 x).
Seven hundred m					,	,,,			/-
(7 X		·							
3 Match:									
Three billion, three	ee thousa	and.			ee hu dred		d thousa	ınd, t	hree
2, (3 X 1,000,000,000)	+ (3 X 10)).		3,00	0,00	3,000	Э.		
3 300,000,300.				□ Thre	ee hu	ındre	d thirty 1	thous	sand.
4 Three hundred, th	nirty.			3 ,00	00,00	0,030	O.		
5 (3 X 100,000) + (3	ane tabl		help				+ (3 X 10		bers
Billions (Milliards)	Mill	lions		3 % .	1.11		0:	(IUS	
Ones			Ones	Hundreds	Tens	Ones			Ones
3	0	9	0	2	0	0	2	4	0
(1) Standard Form	1	H-2707040470	ev'enene-y-e-y-e	কুত র কুকার্যাপর ৮৪ কারু র কুকার ককুকার লাভার		· dopodord deleveránte	라면 수 라스 수 선 이 악스 에서 무리리는 소리라의 순당의 중국	hva þý sarp þaj p sa	lwrow end a B
(2) Word Form:									
(3) Expanded For	m:	D de Bi brake di di al-Brak serille	医哈伊尔 电空动电池 经产品协会	है हैं कि को के का पहुँ का के दिवारों के को पहुँ के के कामण के पूर्ण के हैं, दें जो	r er sa 에ၘ~하 sa 에~림 da da 시a da sa	क्षेत्रकें स पत्तक के प पहल्के के प्रेतक की	देकेंडाच्यूक्तां स्टब्टे प्रेक्टा संस्थापके स्टब्स्ट्रा (a d	(小学 田田特当 田寺中市北 寺)	नीन का चीनकु क्षी का
(4) Expanded Not	ation:	er aer fanske ha ² dd lije ha da fansjir da a	erderfli de sûrdi de sarek de bende se d	र चीनके कुँ चीनका साथ कर की चीनका साच चीनके साथ कु की पर प्रकार की	alver di sever le sa, sa le di sli sli sli	do no, ser su susceirir do no ser no		化圆柱分离化物法 食學療	네 하마스 하마스 약 최미네 수 소



Exercises on Lessons 7,849

Comparing Really Big Numbers, Comparing Numbers in Multiple Forms & Descending and Ascending Numbers

1 Complete the following table using (< , = or >):

а	760,715,213	Aldbiabdalaidaidii	680,715,312
0	245,675	dy-construction and go distribute as also de sur de que	254,576
0	6,550,852	de van nerske fan al skelerek ske sjean skelederke ne ak de	6,505,852
0	500,800	। प्रार्थन न स्वाप्तान न सीवार न सीवार म सीवार न सीवार	5,000,800
e	620,620,620	AATADOAQOFTEE	602,602,602
•	20,000,900	*****	20,000,009
g	45 millions ,45 thousands	alada ar qualador di alada qualada la sambara ar ala	45,045,000
0	(8 X 10,000,000) + (8 X 100)	451++1+1+5+4+1++1+1	80,000,008
0	(6X 1,000,000,000) + (6X1)	*** *********	6,000,000,006
0	5,500,550	***************************************	550 millions, 550
(3)	The smallest 9-digit-number	************	1 X 1,000,000,000
0	Three hundred thirty three million		3,330,000,000
0	100,000,000		The greatest 8-digit-number
0	The smallest 9-digit-number		1 X 1,000,000,000
0	(3 X 100,000,000) + (3X1)		Three hundred million, three
0	Two billion, five hundred five thousand, fifty		2,550,000,050

9	Choose	the	correct	answer:
	0110000	P1 1 2	00110-	

(792,689 💿 796,002 🌚 795,020) < 795,002. (219 @ 269 @ 280) > 279. < 1,000,200,000.

(1,002,000,000 - 1,020,000,000 - 1,000,020,000)

(75,000 @ 70,050 @ 70,005) > 70,500.

Choose from the brackets and complete:

256,256 < < (200,200 , 256,256 , 300,000) 500,000 > (500,000 , 600,000 , 400,000) < 450,450 < © 350,350 (405,405 , 540,540 , 300,300) > 4,000,258 **4,000,600** > (4,000,150 , 4,000,500 , 4,000,000) **3.000.754** < (3,000,554 , 4,000,754 , 5,000,754) > **150,452** >

Arrange the following numbers in an ascending ores, :

@ 25,030,000 , 550,000 , 5,000 , 45,000.

The order:

360,548 , 205,687 , 545,352 , 154,200.

The order:

(150,352 , 150,252 , 150,552)

© 557,859 , 557,895 , 557,589 , 557,985.
The order:
© 500,005 , 505,550 , 500,000 , 500,500.
The order:
5 Arrange the following numbers in a descending order:
a 909,909 , 900,000 , 999,999 , 900,990.
The order:
6 55,125 , 55,512 , 55,152 , 55,251.
The order:
© 300,002,100 , 200,030,001 , 300,020,010 , 200,300,100.
The order:

6 Arrange the following numbers in an ascending order (Write the numbers using the Standard Form):

The order	Number	Standard Form
a	Five hundred thirty million, four hundred fifty.	
6	Five hundred three million, four hundred thousand, five.	
6	Five hundred thirty million, four hundred five thousand.	
d	Five million , thirty thousand, four hundred fifty.	
e)	Fifty million, thirty thousand, forty five.	

Arrange the following numbers in a descending order (Write the numbers using the Standard Form):

The order	Number	Standard Form
<u> </u>	Ninety-nine million, nine hundred ninety thousand, ninety.	,.
(9)	Nine billion, ninety.	
()	Nine hundred and ninety-nine million.	
۰	Nine billion, ninety thousand.	
7	Nine hundred million, nine hundred thousand, nine hundred.	

Arrange the following numbers in an ascending order (Write the numbers using the Standard Form):

The order	Number	Standard Form
a	Five billion, three hundred thousand, ninety.	
⑤	(5 X 1,000,000,000) + (3 X 100,000) + (9 X 10).	
	5,000,000,000 + 300,000 + 900.	
(i)	5,000,003,900.	#\$\$\$\$\$\$\$\$\$\$\$\$
(Five billions, three thousand, nine.	

9 Arrange the following numbers in a descending order (Write the numbers using the Standard Form):

The order	Number	Standard Form
a	1,000,000,000 + 500,000 + 3,000 + 200 + 5.	
6	(1 X 1,000,000,000) + (3 X 10,000) + (2 X 100) + (5 X 10).	,
©	1 billion, 50 million, 325 thousand.	*** * *********************************
d	1,500,030,250.	
e	1 billion, 32 million, 5 thousand.	

10 Choose the correct answer:

а	The value of the digit in th	e Hundred-thousands place .			,,,,,,,,,,	1	he
	value of the digit in the Mi	llions place.	(<	0		O	>)
0	50 Ten-millions	5 Billions.	(<	0	=	①	>)
0	450,000,450	Forty five million forty five.	(<	<u></u>	-	o	>)
0	> 3 millions	. (3,000,000 @ 2,999,99	9 (D 1	0,0	0,00	00)
e	40 millions >	> 30 millions.					
		(350,220,000 💿 35,202,0	00	O	3,0	22,0	00)
0	The largest 8-digit-number	>					
		(99,999,999 100,000,00	0 0	1	0,00	0,00	00)
9	The smallest 9-digit-numbe	er <					
	(One billion 🎯 100 million (o	999	tho	usa	nd)

Worksheet

Choose the correct an	iswer:
-----------------------	--------

Two billion, three thousand, three: . . (in Standard Form)

(2,000,003,003 @ 2,000,303,000 @ 2,003,003)

The digit 8 in the number 214,284,697 is in the place.

(Tens @ Ten-thousands @ Ten-millions)

© 200,450 >

(204,500 @ 245,000 @ 200,045)

The smallest 6-digit-number < ...

(99,999 @ 1,000,000 @ 99,000)

The largest even number consisting of 7 different digits is

(9,876,543 @ 9,876,534 @ 9,999,998)

2 Complete the following:

+ + ...+

(Thousands, Tens) X 100 = 4,050 X 100

The place value of the digit "0" in the number 9,025,123

The value of the digit 5 in the Millions place = 1,000 times the value of the digit 5 in the _____place.

= (8 X 1,000,000) + (8 X 1,000) =

(in Word Form)

Complete using (< , = or >):

	The value of digit 8 in the		The value of the digit 8 in the
a	Hundred-thousand place.		Millions place.
0	(3 X 1,000,000,000) + (3 X 10)	**************	3,000,003,000
0	The greatest 10-digit-number		10 Millions
0	600,000,000 + 60,000 + 600 + 6		600,060,606
е	Eight hundred eighty eight		Eight hundred eighty
9	thousand.		thousand, eight.

4 Arrange the following numbers in an ascending order:

10,025,000 , 10,002,005 , 10,200,050 , 10,020,500

The order:......, ,

on ______10&11

Providence de deprecictable & Rounding Rules

Complete the following table:

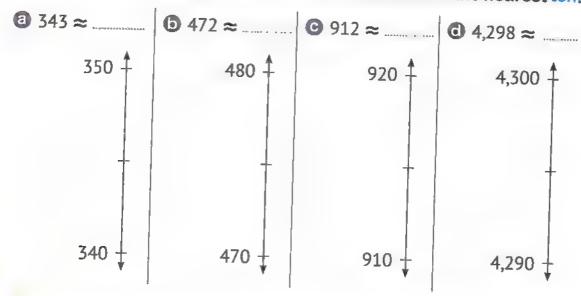
Number	Front-end Estimation
400,235,950	
7,453,002,650	
9 25,000,205	
8,999,899	
459,560	
4,950,009,555	
④ 412,325,696	

Write the following numbers in Standard Form and then estimate the number by the Front-end estimation:

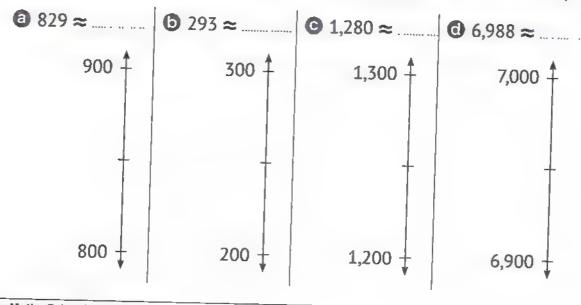
	Numeral	Standard Form	Estimation
	(9 X 1,000,000) + (6 X 100) + (5 X 10)		
3	+ (4 X 1)		
6	(8 X 10,000,000) + (7 X 100,000)		
	+ (3 X 1,000) + (8 X 1)		
C	Eight hundred thirty million, sixty five		
	thousand, four hundred.		
	Nine billion, eighty million,		
	fifty thousand, five hundred sixty three.		
(3)	500,000,000 + 60,000,000 + 40,000 + 8.	$= \hat{q} + q \pi \cos \alpha + \hat{\sigma} \hat{\sigma} + \hat{\sigma}$	

0	80,000,000 + 6,000,000 + 20,000 + 8,000.	******************************	4
9	452 million, 25 thousand, 315.		* ** ******
0	Six billion, six hundred fifty million, nineteen thousand, four hundred.		

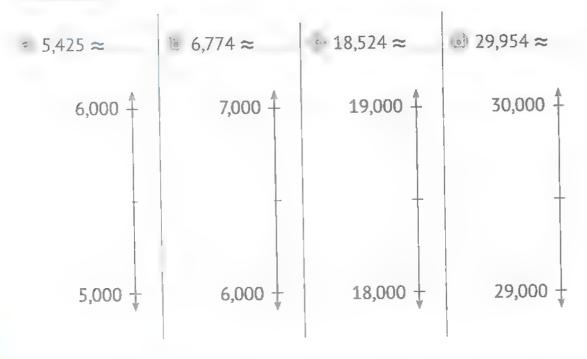
3 Write down the midpoint of the number line. Then locate each number on the number line and round each number to the nearest ten:



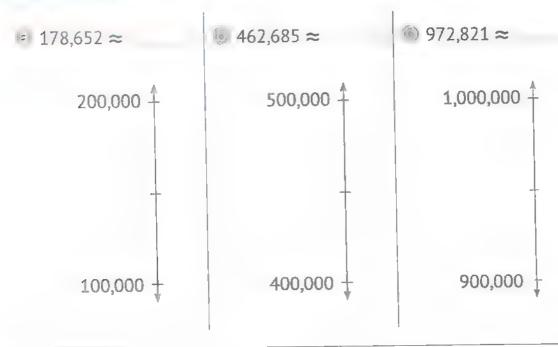
Write down the midpoint of the number line. Then locate each number on the number line and round each number to the nearest hundred:



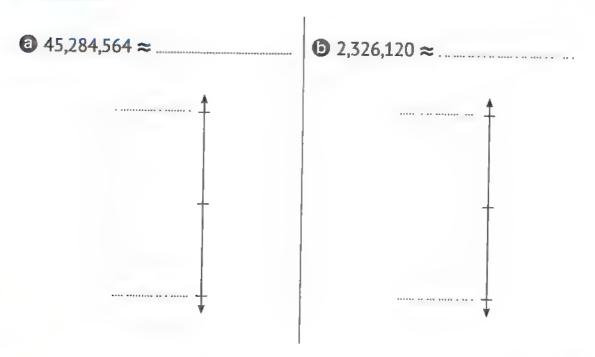
Write down the midpoint of the number line. Then locate each number on the number line and round each number to the nearest thousand:



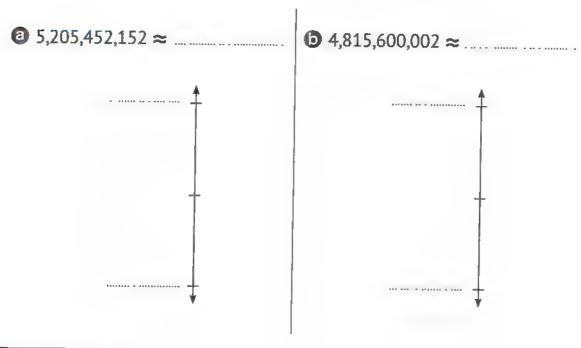
Write down the midpoint of the number line. Then locate each number on the number line and round each number to the nearest hundred-thousand:



7 Write down the midpoint of the number line. Then locate each number on the number line and round each number to the nearest ten-million:



8 Write down the midpoint of the number line. Then locate each number on the number line and round each number to the nearest billion:



0	Round	the	following	numbers	to	the	nearest	10:
---	-------	-----	-----------	---------	----	-----	---------	-----

≥ 54 ≈	
⑥ 845 ≈	⑤ 967 ≈
≈ 7,552 ≈	② 2,595 ≈
@ 75 999 ≈	⑤ 99,999 ≈

Round the following numbers to the nearest 1,000:

≈ 7,869 ≈	ⓑ 6,289 ≈
4,587 ≈	⑤ 9,964 ≈
⑨ 99,900 ≈	 ⓑ 456,400 ≈

Find the result of each of the following, using the Front-end Estimation Suraces, and the Rounding Rule Strategy to the nearest 10 and determine which of them is closer to the actual answer:

Question	Actual Answer	Front-end Estimation Strategy	Rounding Rule Strategy
3 45 + 27		()	
3 22 + 47		()	()
19 + 28			()
156 + 142	13407734777774747474747474747474747474747	()	
344 + 256		()	
123 + 357	\$10000 minyangadinganghidan		4444444444444444444444444

9 89 – 15	SPP-p-hart like ketyn-bû kophayringsiel kudas	CITAM-6402003000000000000000000000000000000000	P-00-00-1-00-1-01-01-01-01-01-01-01-01-01
6 800 – 758	D)*++++VWSGHIALA-(+VSGPIQ+YVVVIII ID BAACA		An-no-orange dominates and Admingo, considerates
1 456 – 359	vzenspļākā pastopaves iniedaudžbuopsa		***************************************
1 987 – 245	\$d\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	AAVVIIIAAAA	***************************************

12 Round the following numbers:

 a 4,545 ≈ 	(To the nearest 1,000)
ⓑ 258,654 ≈	(To the nearest 100,000)
© 299,99 ≈	(To the nearest 10)
d 1,000,000 ≈	(To the nearest 100,000)
● 89,541 ≈	(To the nearest 10,000)
f 654 ≈ 650.	(To the nearest)
② 8,840 ≈ 9,000.	(To the nearest)
ⓑ 2,458,235 ≈ 2,000,000.	(To the nearest)
1 458,605 ≈ 459,000.	(To the nearest
① 7,456,572 ≈ 7,000,000.	(To the nearest)
② 754 + 245 = ≈	,
1 2,856 + 6,410 = ≈	· ·
10 876 – 225 = ≈	_,,,
1 5,000 - 125 = ≈	,

13 Choose the correct answer:

ⓐ 980 ≈ (To the nearest 100) (900 @ 990 @ 1,000) ⑤ 906,456 ≈ (To the nearest 100,000) (1,000,000 @ 910,000 @ 900,000) (100,000 @ 90,000 @ 99,000) ⓓ 6,450,450,≈ (To the nearest 1,000,000) (5,000,000 @ 6,000,000 @ 7,000,000) © 258 ≈ 300. (To the nearest _____) (10 100 10,000) ● 6,587 ≈ 6,600.(To the nearest _____) (10 100 1,000) ⓐ 295,120 ≈ 300,000. (To the nearest _____) (100 on 10,000 on 10,000,000) The largest integer that can be rounded to the nearest 10 so that the The smallest integer that can be rounded to the nearest 100 so that the

Worksheet 🕕

1 Choose the correct answer:	
	(To the nearest thousand)
	(7,000
The smallest 7-digit-number is	навтурфилопоробя Ф
(9,999,99	9 1 ,000,000 1 ,023,456)
© 6,566 ≈ 6,600. (To the nearest). (10 @ 1,000 @ 10,000)
The number of integers that can be roun	
the result is 70 is	(5 💿 10 💿 11)
(a) The number that comes right after the n	umber 2,099,999
is	0
2 Complete the following:	
a Eight hundred ninety-six million, three thous	and, fifteen (in Expanded Form):
=++	
The place value of the digit 5 in the num	
is	
© 6,475 + 4,125 =≈	
The digit 7 in the Billions place =	
Hundred-thousands place	
€≈ 500.	(To the nearest 100)
	greatest whole number possible"
3 Arrange the following numbers in an	
Three hundred thirty thousand , 30,000,030,00	00 , 30,030,000 , Thirty million
The order:	· Provincentalizations and an analysis of another productive and an analysis of the second se

4 Complete the following table:

Number	To the Nearest 10	To the Nearest 100	To the Nearest 1,000	Nearest 10,000
3 56,452	ddb4+xxx) pp Amand440d2002	4		
805,605	Oldelpdabow st vv svynegap	16-7-2-6-7-18-8-18-18-18-18-18-18-18-18-18-18-18-1	agy-wakingheastkiddig awyshangsurtkings	
9,499			=	
9,809				
(2) 10,200				

Using Addition and Subtraction Strategies

Exercises on Lesson

Properties of the Bisan and Subtraction

a 7 + 6 =	e following (Write + 7.			Property
(7+)+	4 = 7 + (9 + 4).	**		Property
6 8 + 0 =				-
3 27 + 19 = 19	+			Property"
(a) 0 + = 9.				Property"
	1 + 94 =+ (27	+ 71) +	, er e m e gin j grûs a er u a u gê degre u a aran e d jj. û punde e de,	Property"
,	(M		Drawaut."
9 + 18 = 1	.8 + 39.	44		Property"
6 28 + = 2				Property"
		***************************************	000 A A A A A A A A A A A A A A A A A A	Property"
	+ 417 = 300 + (
Complete the	following problem	ıs using t	he proper	ties of
addition: (Wri	te the property us	ed):		
1 5 + 27 + 85	=+ 85 +		et	Property"
	= (+ ,) +	a	Property"
	=			rioperty
	- Accountable provinces and the second secon			
1 755 ± 615 ± 2	45 = 755 + +	615	nr .	Property"
9 733 ± 013 ± 22				
9 755 ± 615 ± 22	= + (+) "	Property"
9 733 ± 613 + 22	=+ ()	Property"

Choose the correct answer:

9+2=2+9.		Mysteriory to appear to the foundation in the following and the first of the following the first of the first	Property"
	(Neutral Element	Commutative	Associative)
(a) (100 + 117) + 25 = 10	0 + (117 + 25).	dis days so report surport or proper proper and a stand menda an	Property"
	(Neutral Element	Commutative	Associative)
\bigcirc 245 + 0 = 0 245.		106	Property"
	(Neutral Element @	Commutative @	Associative)
(a) 8 ÷ (5 + 12) = (8 + 5)	+ 12.	44 44 5 4 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4	Property"
	(Neutral Element	Commutative	Associative)
a 205 + 15 = 15 + 205.		ild www.jograpedojajenskiholomindusbiholomindus	Property"
	(Neutral Element	Commutative	Associative)
$\bigcirc 0 + 215 = 215 + 0.$		Employed by the special of the formula and the special of the	Property"
	(Neutral Element @	Commutative ©	Associative)
<pre>(9) 4+3+(7+6)=4+(</pre>	3 + 7) + 6.	did	Property"
	(Neutral Element	Commutative	Associative)
\bigcirc 45 + 0 = 45.		did	Property"
	(Neutral Element	Commutative	Associative)
42 + 15 + 85 = 42 + (1	5 + 85) = 42 + 100 =	: 142. "	Property"
	(Neutral Element	Commutative ©	Associative)
45 + 55 + 123 + 27 = ((45 + 55) + (123 + 27	7) = 100 + 250 =	350.
" Property	" (Neutral Element	Commutative	Associative)

Worksheet

1 Complete the following:

... Property"

$$6 (85 + 48) + 52 = ___ + (48 + 52).$$

(To the nearest 10,000)

Property"

Choose the correct answer:

Property"

(Neutral Element @ Commutative @ Associative)

The smallest 6-same-digit-number is _____.

(999,999 @ 100,000 @ 111,111)

G
$$25,452 \approx 30,000$$
.

(To the nearest _____)

(1,000 • 10,000 • 100,000)

$$\bigcirc$$
 25 + (75 + 26) = (25 + 75) + 26.

Property"

(Neutral Element @ Commutative @ Associative)

Five hundred fifty million, five: ______.

(in Standard Form)

(550,005 @ 550,005,000 @ 550,000,005)

Complete using (< , = or >):

Three million, five hundred

3,000,050

(3 X 100,000) + (7 X 1,000) + (2 X 100) + (5 x 1)

9 909,990

990,090

400,300,200

400 + 300 + 200

Arrange the following numbers in an ascending order:

3,584,852 , 3,458,582 , **3,854,852** , **3,548,25**8

The order:,

Write down the midpoint of the number line. Then locate each number on the number line and round each number to the nearest 1,000:

4,458 ≈



Exercises on Lessons 2&3

Mental Math Strategies & Addition with Regrouping

1 Use the Front-end Estimation Strategy, then find the result:

2 Use the Rounding Strategy, then find the result:

(a)
$$76 + 42$$
 (To the nearest 10) \rightarrow 80 + 40 =

=

to find the result (Show your Use the steps):

in the countriesing deracting to find the result Use the (Show your steps):

=	- *************	 *********	 _	 	

=

=

6 564 – 45

=

=

=

9 542 + 231

G 256 – 45

=

986 + 241

=

= ______

a 8.456 - 998

6 6,725 + 1,234

3,957 - 2,214

5 Use Counting Up Strategy to find the result:

Find the result of each of the following:

$$\textcircled{0}$$
 341,250 + 219,263 = ____

Complete the following table:

(Determine which of the estimates is closest to the actual solution)

Problem	To the Nearest 10	To the Nearest 100	To the Nearest 1 000
24,456+13,428	+	+	+
	()	()	()

Problem	To the Nearest 10	To the Nearest 100	To the Nearest 1 000	
256,634				
+ 885,365	* + **	distributed or of the dependent of the second pro-	1 .	
	()			

Problem	To the Nearest 10	To the Nearest 100	To the Nearest 1 000
② 2,256 + 3,815	# ************************************	The speciment and an extended when the speciment and the speciment	+
	()		

Problem	To the Nearest 10	To the Nearest 100	To the Nearest 1 000	
125,278			,	
+ 289,132	+	*******************************	+	
.,, ,	()	()	()	

8 Answer the following:

② Nada has 7,245 piasters, and Ahmed has 9,372 piasters.
What is the sum of what Nada and Ahmed have together?
Explain your steps and then check the reasonableness of your answer.

Estimation	(Use	Rounding	to the	Nearest	100):
	1000	1100111011119			,

The actual answer:

The number of girls in a school is 458 and the number of boys is 367. What is the total number of students in the school? Explain your steps and then check the reasonableness of your answer.

Estimation (Use Rounding to the Nearest 10):

The actual answer:

The desert silver ant is the fastest ant on the planet. It can move about mm per second. If this ant can maintain this speed for two seconds, how far will it go?

Explain your steps and then check the reasonableness of your answer.

Estimation (Use Rounding to the Nearest 100):

The actual answer:

The distance between Aswan and Assiut is it km, and the distance between Assiut and Alexandria is 618 km.

How far is the distance between Alexandria and Aswan?

Explain your steps and then check the reasonableness of your answer.

Estimation (Use Rounding to the Nearest 100):

The actual answer:

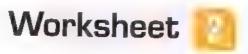
tourists visited the Egyptian Museum on Sunday, and tourists visited it on Monday.

How many tourists visited the museum in the two days?

Explain your steps and then check the reasonableness of your answer.

Estimation (Use Rounding to the Nearest 100):

The actual answer:



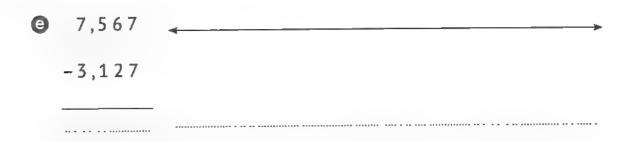
1 Complete the following:	
a 25 + 99 = 24 + =	1010 sabersanskansprings
5 300,750 = (3 X) + (7 X) + (5 X)
The value of the digit 9 in the Ten-	
a 8 + (7 + 9) = (8 + 7) +	
© 74,632 ≈	(To the nearest 1,000
2 Choose the correct answer:	
a 7,145 ≈ 7,100. (To the nearest) (100 a 1,000 a 10,000
6 (8 X 100,000,000) + (8 X 1,000) =	
(808,	,000,008,000 💿 800,800,008 💿 000,
© 56 + = 54 + 100.	(100 🕡 102 💿 98
6 75 − 49 = 74 −	(50 @ 48 @ 98
2 5 + 75 = 75 + 25.	* Property
(Neutral Elen	nent of Commutative of Associative
3 Arrange the following numbers in	n a descending order:
990,909 , 9,900,990 ,	100,000 , 1,000,000
The order:	herbro g dovernamicalhodombonoscopicoscopicos y backronoscopicoscopicoscopicoscopicoscopicos
4 773 ships passed through the So	uez Canal in January, and 375
ships crossed it in February. Find t	
through it in the two months? Exp	
the reasonableness of your answ	
Estimation (Use Rounding to the Nea	
The actual answer:	
40	

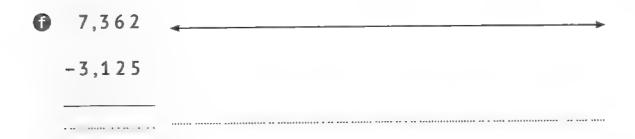
English on Laurent 4&5

Turnaction Strategies & Subtraction with Regrouping

Solve the following problems using the Count Down Strategy:

$$-254$$





9	7,600	
	-1,246	

Solve the following problems using the



-516



800 -624

3,475 -1,385

7,357 -3,253

0	4,245	←
	-3,152	
		······································





3 Use the Place Value table to find the difference:

	Thousands		Ones				
Hundreds	Tens	Ones	Hundreds	Tens	Ones		
	,						
-			-	<u> </u>			

	Thousands		Ones				
Hundreds	Tens	Ones	Hundreds	Tens	Ones		

	Thousands		Ones				
Hundreds	Tens	Ones	Hundreds	Tens	Ones		

48,638 - 26,246 = ...

Thousands		Ones				
Tens	Ones	Hundreds	Tens	Ones		
	Tens			Tillousanus		

6 365,248 - 134,125 =

	Thousands		Ones				
Hundreds	Tens	Ones	Hundreds	Tens	Ones		

4 Find the result of each of the following:

a 65,438	5 700,976	G	250,039
- 29,278	- 158,295		- 72,278

Subtract using one of the superaction surategies, then round each number and estimate the result: (Show your steps using the required strategy and the Rounding Strategy):

6	50	
- 5	42	

Using Counting Down with the Number Decomposition Strategy:

Rounding to the Nearest 100



3,245 -2,275

Using Counting On with the Number Decomposition Strategy:

Rounding to the Nearest 1.000



	15,207	
_	12,352	
_		

Rounding to the Nearest 10,000

				+1	+ #	46			* 1	, .	-
_	-	h+	1+	**	**		•	+			
								4.			

Using Place Value table Strategy:

Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones
				_	

6 Answer the following:

a	Some students	wanted t	o plant 621	trees	in their	village.

They planted 476 trees. How many trees are left?

Sarah had 1,270 pounds, she bought a dress for 630 pounds.

How many pounds are left with Sarah?

A primary school with 1,028 students, 542 of whom are girls.
How many boys are in this school?

	Unit B Addition and Subtraction Strategie
0	Eman has 3,256 pounds, and Sameh has 2,804 pounds.
	What is the difference between their money?
·E	The height of a tree is 1,200 cm, and the length of its shadow
	is 235 cm.
	How much taller is the tree than its shadow?
c	There are 4,015 books in the school library, 725 books were
	borrowed by the students.
	How many books are left in the library?
1000	A family saved 3,250 pounds to buy a TV.

If the price of the TV is 5,100 pounds, how many pounds does this family need to buy the TV?

Worksheet 🕕

1	Complete	the	following:

Nine billion, five hundred thousand, four hundred: _____.

(in Standard Form)

The place value of the digit 6 in the number 56,124,248 is _____.

© 245 + 243 = ____ + 245.

② 27,957 ≈ 30,000.

(To the nearest _____)

2 Choose the correct answer:

The smallest 6-even-digit-number is _____.

(100,003 @ 100,000 @ 102,254)

(3) 4,000,000 + 60,000 + 100 + 9 = _____.

(64,000,109 @ 40,060,109 @ 4,060,109)

© 1,000,000 - 1 = ______.

(9,999,999 @ 999,999 @ 99,999)

1 50 Hundred-thousands = _____ Thousands.(500 @ 5,000 @ 50,000)

 \bigcirc 45 + 0 = 45.

(_____Property)

(Neutral Element @ Commutative @ Associative)

3 Find the result of each of the following:

75,654 + 15,257

6 40,802 + 9,258 **6** 63,880 **-** 52,209

800,002 - 89,566

4 Subtract using the number line:

754 – 245 =

5 773 ships passed through the Suez Canal in January, and 375 ships passed in February. Find the difference between the number of ships that passed through it in the two months.



on 6&7	
--------	--

Villa e al Lung moderas & The state of the state of a state of the st

Read the following questions. Create a Bar Wodel and an for each problem and then find the solution.

7	There are ants in the colony. Some ants go out looking for food
	while ants dispose of the garbage outside the colony.
	How many ants are searching for food?

Bar Model:

	i i	

Equation: Solution:

There are ants in the colony. 11,000 ants of them are females and the rest are males. How many male ants are there in the colony? - Bar Model:



Equation: ...

and the rest live	in other parts of the world.
How many specie	es do not live in Africa?
Bar Model:	
Formation	
Equation:	***************************************
Solution:	AND THE PROPERTY OF THE PROPER
1 Tariq practiced w	alking. On Monday, Tariq walked a number of steps,
	r 10,075 steps on Tuesday. Now, a total of 78,200
	by Tariq . How many steps did he take on Monday?
Bar Model:	, , , , , , , , , , , , , , , , , , , ,
Equation:	
Solution:	
A worker ant trave	elled 3,500 meters on Monday and then
	Tuesday in search of food.
	nt travel on Monday and Tuesday together?
Bar Model:	

Equation:	7334141141414141414141414141414141414141
Solution:	
Maths Prim. 4 - First Term	

There are 12,000 species of ants. 2,500 of these species live in Africa

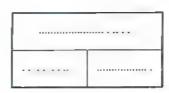
	The number of books in the school library is 890, and the number of
	borrowed books is If students return all borrowed books,
	how many books will be in the library?
	Bar Model:
	Equation:
	Solution:
	2. Mahmoud saved injectors and got 312 000 pinstors from his
	Mahmoud saved piasters and got 39 000 piasters from his
	father. What is the sum of Mahmoud's money?
	Bar Model:
	Equation:
	Solution:
	Read the following questions.
-	Then use the word problems solving steps.
	The Suez Canal extends from Port Said to the city of Suez, and its
	length is meters. If a boat travels =3,620 meters every day
	, , ,
	for two days, how many more meters will it have to travel to reach the end of the canal?
	the end of the tanat?
	" " 11 to 1440 "

0	The population of Tanta is 404,901 people. The population of Benha
	is 167,029 people, and the population of Kafr Al-Dawwar is 67,370.
	What is the population of Banha and Kafr Al-Dawwar together? And
	what is the difference between their population and Tanta's population?

- Salma was counting the ants in the colony. She counted 1,525 ants on Monday, 19,750 ants on Tuesday, and 3,705 ants on Wednesday. If there are 30,520 ants in the colony, how many ants does she still need to count?
- A local bakery sold 1,232 doughnuts in one day. If they sold 876 doughnuts in the morning, how many doughnuts did they sell during the rest of the day?
- 2 Solve the following equations:
 (Make a Bar Model and then find the solution):

$$\mathbf{a} \times + 125 = 207.$$

Bar Model:



Solution:

 $\textcircled{3} \times + 514 = 1,025.$

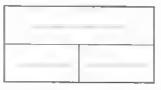
Bar Model:



Solution:

 \bigcirc 2,087 + \checkmark = 7,248.

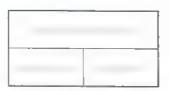
Bar Model:



Solution: ...

(a) 69 + Y = 1,200.

Bar Model:



Solution:

Bar Model:



Solution:

69 + - 258 = 915.

Bar Model:



Solution:

_					
9	542	-	B	=	289.

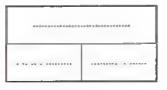
Bar Model:



Solution:

(b)
$$845 - N = 457$$
.

Bar Model:



Solution:

Bar Model:



Solution:

Bar Model:



Solution:

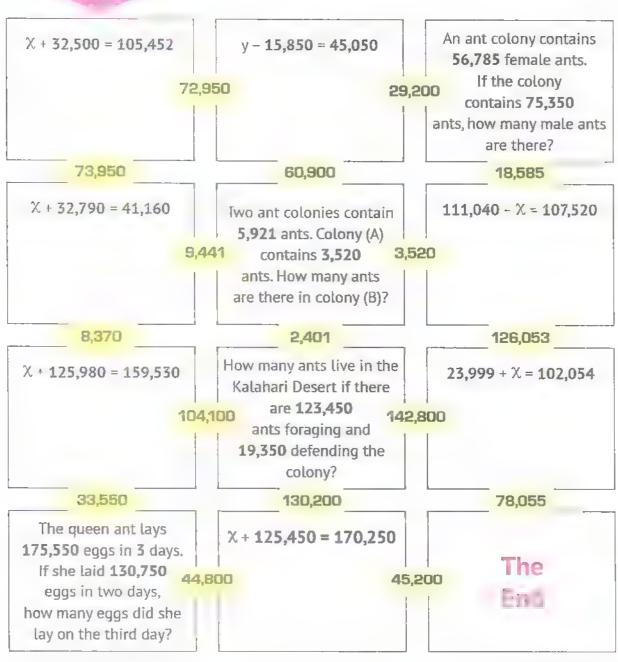
The Maze

Your goal is to complete the game from the "Start" to the "End".

Start the game from the "Start" sign.

To move to the next space in the game, the number in the path must be a solution to the space you are in. Use the arrows to show the path you took. When you reach the end, you have completed the maze. **Good Luck!**





Unit 3 Concepts of Measurement

Concept 3.1 Metric Measurement

Exarcises on Lesson

Ant Travel (Units of Length)

1 Choose the best	unit for measuring each of the following:
a An insect length:	**************************************
	(Kilometers @ Meters @ Centimeters @ Millimeters)
6 Pencil length:	
	(Kilometers @ Meters @ Centimeters @ Millimeters)
Home height:	macrosoftester constraint from a final fin
	(Kilometers @ Meters @ Centimeters @ Millimeters)
The distance betw	een Cairo and Tanta:
	(Kilometers @ Meters @ Centimeters @ Millimeters)
Ant length:	AMANJANA AMANANA MARANA MA
	(Kilometers @ Meters @ Centimeters @ Millimeters)
f Child's height:	***************************************
	(Kilometers @ Meters @ Centimeters @ Millimeters)
The distance betw	een home and school:
	(Kilometers @ Meters @ Centimeters @ Millimeters)
6 School height:	
	(Kilometers @ Meters @ Centimeters @ Millimeters)
Banana length:	and the same and t
	(Kilometers @ Meters @ Centimeters @ Millimeters)

Class length: .

(Kilometers - Meters - Centimeters - Millimeters)

Window width:

(Kilometers - Meters - Centimeters or Millimeters)

Complete each of the following tables:

Kilometer	Meter
8	**************************************
12	HORY DOOTADE OROAL COORDS wie
250	v h= 44 h p r h= 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	2,000
	30,000
	650,000
90	dala dala kana dala kana dala kana p
	600,000
100	he h

. 3	Meter	Centimeter
	2	Hiệy đị da chi di Buhinhi di dinhu muling gọ nhi đị du mạy gọ g
	15	****************
	258	4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	\$10P\$>1010A10410444444444	800
	# = # # # # # # # # # # # # # # # # # #	2,000
	**********	10,000
	20	
		4,200
	1,000	

Meter	Decimeter
4	B74D44D42444444444444444444444444
20	
12	
à 1. E Aà 11 A \$ 41 A \$ 5 A \$ 45 T \$ 4 A \$	60
	200
***********************	150
100	
	10,000
450	

Complete the Bar Models to





9	E 4.54+0-4.50+04.64	cm
	30 m	5 cm

😘 units:

0			
	8	550	

	-	
10		35



57	74	

7,050	-		

	60,250 cm	
-	m	CDD

1,258

20	240	
20	,2-10	
	20	20,240

65,005 m	
km	

0	405 cm	
	cm	dm

825 mm	
cm	mm

0

9	220 cm	
	m	dm

4 Complete the following:

$$\bigcirc$$
 8 km, 750 m = m.

$$\bigcirc 5 \text{ m}, 5 \text{ dm} = \dots \text{ dm}.$$

$$\bigcirc$$
 21,050 cm = m, cm.

Choose the correct answer:

The best unit for measuring the length of an eraser is

		illimeter @ centimeter @ meter)
(a) 70 m = ,	cm.	(7 💿 700 💿 7,000)
(i) 8,000 m =	km.	(8 @ 80 @ 800)
50 km + 20 m ≈	m.	(5,020 @ 520,000 @ 50,020)
\odot 50 m + 5 dm =	cm.	(505 @ 5,050 @ 550)
30,000 dm =	·····	(3,000 @ 300 @ 30)
⑤ 6,000 cm	600 m .	(< 0) = (1) >)
1 5,000 m	50 km.	(< 0 = 0 >)
1 2 m + 25 cm	22 dm + 5	

When the scientists poured cement in the ant colony and dug inside it, they found that the colony was 8 m deep. How many centimeters is the depth of the ant colony?

Ants in a colony transported 40 tons of soil while building their house, and this was done in billions of trips. Each ant carried a portion of the soil to the surface. The weight of what an ant carried is 4 times its own weight.

This means that each ant carried what it was carrying up to a kilometer to the surface

If each ant could move 10 loads of soil in a week, How much is this in kilometers, meters, and centimeters?

$$km = m = cm.$$

The height of a school building is 25 m. What is the height of the building in decimeters, centimeters and millimeters?

If one black ant can walk 250 meters in one hour. How many hours will it take to walk it kilometer?

Worksheet

1 Choose the cor	rect answer from the	e brackets:	
The best unit for	measuring the length	of a school bus is	5
	(met	ers 👓 centimeter	rs 🎯 kilometers)
Dekagram is a m	easurement units of	5-5-5-5-5-5-5-5-5-4-MARINAR NEWSAN (1-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5	
		(height 🐠 m	nass 👓 capacity)
© 250 million, 50 t	housand and 5 =		Standard Form)
	(250,055,000	0 0 250,500,005	<u>o</u> 250,050,005)
d 200,000 cm =	ration and an annual number of the B	(2 km 🌚 2	20 m 🎯 200 dm)
6 45 + 98 =	+ 100.		(47 💿 50 💿 43)
2 Complete each	of the following:		
-	m +	m =	m.
	m +		
	f measurement of		
The place value	of the digit 8 in the nur	mber 8 ,417,216,2	34 is
	525 ≈		the nearest 100)
3 Complete using	(< , = or >):		
	4,958,456 6 4,5	00 cm	450 m
© 50,025 m	5 km, 25 m @ 56	+ 30	54 + 28
	0) + (2 X 100) + (7 X 1)		00,000+ 200 + 7
4 Arrange the foll	owing numbers in a	n ascending o r	der:
25 m	, 1,500 cm , 2 k	m , 2,000 dm	
The order:		ş ,	CALDINATE AND A SERVICE CONTRACT OF THE PERSON OF THE PERS
5 The distance be	etween Samah's hou	ise and her sch	nool is 2 km.
	ance in meters, dec		
2 km =	m =	dm =	cm.

on Leadin 2

Choose the best unit for measuring the reason of each of the following (gram or kilogram):

A book.	Windowski de all and a september of the)
📵 A pen.	And a label to the second seco)
A rabbit,	endantifications of the same o)
(1) A car.	CALLED MARKET CONTROL OF THE CONTROL)
A ring.)
A chair.	()

Complete each of the following tables:

Kilogram	Gram
5	2-1-12-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0
70	54545405650=999994=4444554
200	p-f-p-p-p-p-p-p-p-p-p-p-p-p-p-p-p-p-p-p
h 학 p 학 학 수 감 수 감 는 장 상 점 점 는 하 하 수 있 수 수 수	8,000
(12,000
5909000 mining 2000000000000000000000000000000000000	258,000

Gram	Kilogram
9,000	表面表面 医皮肤 医甲磺胺甲甲磺胺甲甲磺胺甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲
30,000	ум ф.ў. 2 4 4 2 4 4 ф. 4 ф. 4 ф. 4 4 4 4 4 4 4 4 4 4 4
500,000	
	7
444 44 made 404 500 000 000 000 000 000 000	34
	126

Complete the Bar Models to ... between mass:

gram	
5 kg	200 gm

***************************************		gram
	15 kg	15 gm

6		gram	
	8	kg	7 gm

0	, .	W. 7
	20 kg	200 gm

(2)	3,250 gram				
	kg	gm			

•	60,024	gram
	mana kg	gm



0	10,006 gram				
	kg	gm			

4 Complete each of the following:

- 4 kilograms = ... grams.
- **6** 20 kilograms = grams.
- 300 kilograms = grams.
- **@** 680 kilograms = ____ grams.
- (a) 3,000 grams = _____ kilograms.
- **19** 90,000 grams = _____kilograms.
- **(9)** 600,000 grams = _____ kilograms.
- **1** 905,000 grams = _____ kitograms.
- ① 3,250 gm = ____ kg, ___ gm.
- ① 24,120 gm = _____ kg, ____ gm.
- 30,020 gm = ____ kg, ___ gm.
- 300,008 gm = ____ kg, ___ gm.
- @ 3 kg, 245 gm = ... gm. @ 15 kg, 20 gm = ... gm.
- **1**2 kg, 150 gm = gm. **2**0 kg, 100 gm = gm.

5 Choose the correct answer:

- (Gram @ Meter @ Liter)
- The gram is the best unit for measuring the mass of a

(ring on child on car)

- **⊙** 40 kilograms = grams.
- (400 @ 4,000 @ 40,000)
- **@** 200 kilograms = grams.
- (200,000 @ 20,000 @ 2,000)

(a) 60,000 grams =kg.

(6 @ 60 @ 600)

3,000 grams = kg.

(3 @ 30 @ 300)

(a) 20 kg, 50 g = grams.

(250,000 @ 2,050 @ 20,050)

 $45 \cdot 10 \text{ kg}, 300 \text{ g} = ... \text{ grams.}$

(10,300 @ 1,300 @ 103,000)

Hassan has a cow that weighs 125 kilograms and 350 grams. Rewrite the weight in grams.

The total weight of all ants on Earth equals the total weight of all humans. One ant colony weighs 3,493 grams. Rewrite this number using kilograms and grams.

Ahmed bought 5 kilograms and 200 grams of oranges, and Adam bought 5 kilograms of oranges.

Rewrite these weights in grams and then find the sum of the weight of what Ahmed and Adam bought.

Worksheet 💹

1	Choose the correct answer:		
	ais a unit of mass r	neasurement.	
		(kilolite	r 🚳 kilometer 🐠 kilogram)
-	D The kilogram is the best unit fo	r measuring th	ne mass of a
			(balloon 💿 pencil 💿 desk)
	9 50,000 grams =k	g.	(50 💿 500 💿 5,000)
	3 30 kg + 125 g = g	m. (3,125 💿 31,250 💿 30,125)
(The value of the digit 5 in the	Ten-thousands	s place is
		(5)	00,000 @ 50,000 @ 5,000)
0	Complete each of the following	200	
	Complete each of the followi		
	The largest 7-digit-number is		
	5,000 + 0 + 0 + 0 + 4 =		
	© 56,240 grams = k		
(310,205 (in Expanded Notation		unionium en en esta esta de la facilitat de la compania de mandre en la companya de la compania de la compania
	nd - yndydd (na) dd 1 dd		darmar-skillillerift obtiffetetetetetetetetetetetetetetetetetet
(The number that comes right at	ter 999,999 is	**************************************
3	Complete using (<, = or >):		
	a 20 kg 2,000 g.		
	The mass of a rabbit the	e mass of a ca	r.
(© 7,306,820 7,368,200.	d 2,500 dm	250 m.
		50 thousand,	
4	Ahmed bought 4 kilograms a		
	3 kilograms of apples and 90	0 grams of s	strawberries.
	Rewrite these weights in gra	ms and then	find the sum of the
	weight of what Ahmed bougl	nt.	

on

Fill It Up (Volume/Capacity)

Choose the best unit for measuring the capacity of each of the following (liters or milliliters):

- A water cup.
- A swimming pool.
- A spoon filled with medicine.
- A car's fuel tank.
- A family juice box.
- A perfume bottle.

(A CONTRACTOR OF THE CONTRACTOR	1841 18 11 4 4 4 1 4 1 1 1 1 1 1 1 1 1 1)
,			
(-	***************************************	1 1 4 4 E)
1			

(- - - - - - - - - - - - - - - - - - -	*************************	 ***)

W				
/				- 1
1.	 			

Complete each of the following tables:

(3)	Liter	Milliliter
	5	**************************************
	70	
	800	φ.ψ.πφ.φ.ψ.φ.φ.φ.φ.φ.φ.β.β.β.β.β.β.β.β.β.β.β.
		3,000
		35,000
		143,000

•	Milliliter	Liter
	2,000	*********************
	60,000	各种各种物质系统上的对 化四环冷化 (P) 合作 II E
	900,000	
	\$\$\$\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	7
	$d \otimes d \otimes$	15
		771

Complete the Bar Models to convert the following volume units:

	*
7	450
	400 元

20	8	

\$ 	11
12 ,	50 ml

0	mt
12 1	500 ml

0	8,05	66 ml
		ml

0	31,50	00 mL
	m quan va m delerit di dalari dindele II de li	ml

9	40,00)3 ml
		ml

0	6,070 ml
	abardardardordere ml

Complete each of the following:

a	3	liters		milliliters.
	_	rirei 3	企业企业报报的企业企业	Illinerence of the

Choose the correct answer:

@ is the	best unit for	measuring the	capacity of a	a cup of tea.
----------	---------------	---------------	---------------	---------------

(Milliliter Liter Centimeter)

(capacity on mass on length)

·				
20 liters =	milliliters.	(2,00	00 @ 20,000 & 200),000)
7 100 liters =	milliliters.		00 @ 10,000 @ 100	
5,000 milliliters =	liters.		(5 @ 50 a	500)
300,000 milliliters =	liters		(3 @ 30 @	300)
- 45 liters + 45 millilite	ers = mill	iliters. (4,5	545 @ 45,450 @ 45	,045)
60 liters + 6 milliliter	's = mi	lliliters. (6	6 <mark>06 🌣 60,00</mark> 6 🖛 60	,060)
The fish tank can b	e filled with	i) liters	of water. If the	tank
contains 35 liters ar				LOTTE
– How much water do				
50 liters =				
35 liters, 130 millilit	ers =	milliliter	5.	
– Amount of water nee	eded =		and a	,
Essam has / liters a	nd www.milliliter	e of euni	lower oil and ha	alaa
has liter and			iowei oli, and ne	aiso
- How much oil does I		,, , , , , , , , , , , , , , , , , , ,		
4 liters, 250 millilite		nilliliters		
Liters, 50 milliliters				
- Amount of oil =				
A water tank annihim	_ 11 424			
A water tank contain				
			ters and 300 millil	iters
the next day. How mu			nk?	
- Use the following Ba		<u> </u>		1
	liters =	milliliters		
125 l,500 ml = ml	250 L,600 ml	ml	. ml	

- Amount of water left =

Worksheet

1 C	choose	the	correct	answer:
-----	--------	-----	---------	---------

a A billion is the smallest number formed from ______ digits.

 $(7 \odot 9 \odot 10)$

(5,000 © 50,000 © 500,000)

14 liters, 14 milliliters = ____ milliliters.

(1,414 @ 14,140 @ 14,014)

3 50,000 milliliters _____ 5 liters.

(< 0) = 0) >)

The number 75,499 is rounded to the nearest 1,000 ≈ _____.

(76,000 @ 75,000 @ 74,000)

Complete each of the following:

a 80,000,000 + 8,000,000 + 8,000 + 8 = _____. (in Standard Form)

6 20,250 milliliters = ____ liters, ___ milliliters.

© 2,050 milliliters = ____ centimeters, ___ millimeters.

(a) If: $\chi - 45 = 15$, then $\chi =$

© 50 kg, 20 grams = _____ grams.

3 Find the result:

a 23,456 + 64,247 = _____ **b** 65,754 - 37,244 = _____ .

6 45,565 + 54,435 = _____. **6** 80,000 - 24,000 = ____.

4 Arrange the following numbers in a descending order:

500,500 , 5,500,000 , 500,005 , 5,050,000

The order:

5 A bottle contains two liters of juice. Adel drank

660 milliliters of it. How much juice is left in the bottle?



1 Complete the following table:

ometer	meter	ameter	Meter	focimeter	Centimeter	faillimeter
			5,000			
9						,
	-					2,000,000,000

2 Complete the following table:

gram	gram	gram	Gram	gram	gram	.gram
	10					
		800			** *	
					1,000,000	

3 Complete the following table:

liter	liter	liter	Liter	liter	liter	liter
				600,000	* * ****	
7	•					
		5,000		* 15 745.4 5.4	,	

4 Convert between units of measurement using multiplication or division:

			_	
a	8 meters		2 4 B 4 B 5 4 B 5 4 7 F 7 F 7 F 7 F 7 F 7 F 7 F 7 F 7 F 7	centimeters
0	2,000 centimeters	######################################	B 4 N H H B B B B B B B B B B B B B B B B B	meters
0	50 meters		************************	centimeters
0	20 kilometers	OF THE BUTTER OF THE STATE OF T	a ağıısı'n usbi'nunuşiyişir ve bilirin — 4000-	hectometers
е	30 dekameters		# # # # # # # # # # # # # # # # # # #	hectometers
0	500 decimeters	aro subjection almost the state of the substitution of the substit	\$ www.clopin.com/2,440-4.440-4.440-4.440-4.440-4.440-4.440-4.440-4.440-4.440-4.440-4.440-4.440-4.440-4.440-4.4	Meters
9	5,000 millimeters	************************************	4014994-97269299292204-0644	Centimeters
0	20,000 grams	NA ha NENDO GOOD FO WO - WO A CO A CONTROL DO CO DO CO POP A POPA A A A A A A A A A A A A A A	4-54-64-64-64-64-64-64-64-64-64-64-64-64-64	Decigrams
0	500 grams			Dekagrams
0	500 centigrams	$view * \psi * 16 + 0.69794 = 2.492 * \psi * 1.092 * 0.00274 $	L EAGUE ÇGEERGGÉGEGGGGGGGGGGGGGGGGG	Milligrams
(3)	200 hectograms	quip modern mader (,) g) g it	医电声电影 计中央部分 医水杨醇 医水杨醇 医水杨醇 医水杨醇 医水黄素	Dekagrams
0	400 hectograms	va	***************************************	Kilograms
0	9,000 grams		***************************************	Kilograms
0	12 liters	マングラルボからしからにものに2001にのですがかからからなからなからなからない。 本本の人の人の人の人の人の人の人の人の人の人の人の人の人の人の人の人の人の人の		milliliters
0	25 liters	p-og-mappollo zo z do ziez zvró zvró-v-o-o-o-al ulos finiciásov 6-v-o-d-pod af cadal delac e divide five	y-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4	Deciliters
0	400 liters	マリアサルクスではながない またかなな エクセック・マルクラ 人名との人 日本日日日日日のログロッドウェック・ファルクラルス ウオリカル マルコ リカロ アクトリカル マルコ リカロ アクトリカル アルコン・アルクラルス アルコン・アルクラルス アルコン・アルファン・アルウン・アルファン・アルフ		Dekaliters
9	5 kiloliters		40 2444 442 phys chies a startectur	Hectoliters
G	500 centiliters	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	ψ-φφραφαζφφασφατοσιφθαπόνδ+b	Deciliters
6	200 milliliters		ь и до во реповинения в физической до	deciliters

5 Complete the following:

- 12 meters = decimeters = centimeters.
- 1,000 meters = dekameters = hectometers.
- **©** 3 kilometers = hectometers = tetrameters.

- 500 millimeters = centimeters = decimeters. 35 grams - decigrams = centigrams.
 - 2,000 grams = dekagrams = . . hectograms.
 - Ø 7 kg = _____ dekagrams.
 - 600 milligrams = . . . centigrams = . . decigrams.
 - 30 liters = _____ deciliters = ____ centiliters.
- 9,000 liters = dekaliters = hectoliters.
 - : 11 kiloliters = hectoliters = dekaliters.
 - 7,000 milliliters = centiliters = deciliters.

An ant walked meters from its ant house to search for food. What is the distance travelled in centimeters?

A colony of army ants is known to consume 6 decigrams of food in one day.

How many ____ of food does the colony consume?

ants drink one liter of water.

How many so of water do ants drink?

The height of a school building is 15 meters. What is the height of the school building in millimouses?

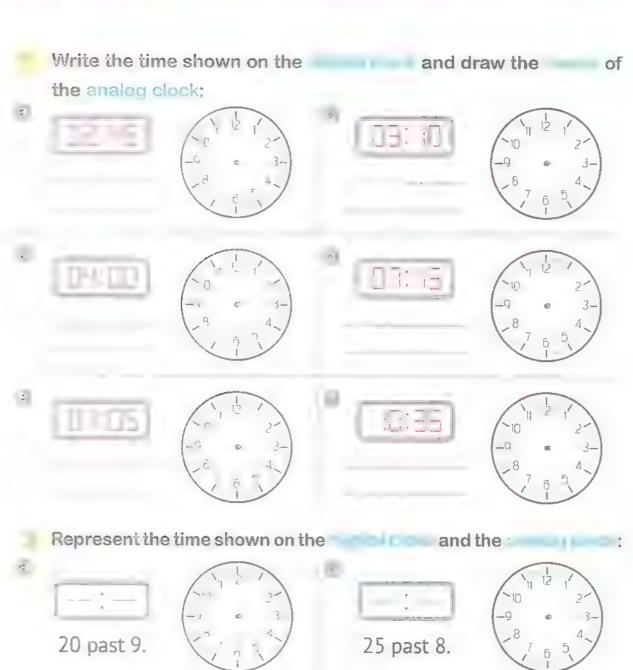
A person needs about a liters of water per day. How many of water a person needs per day?

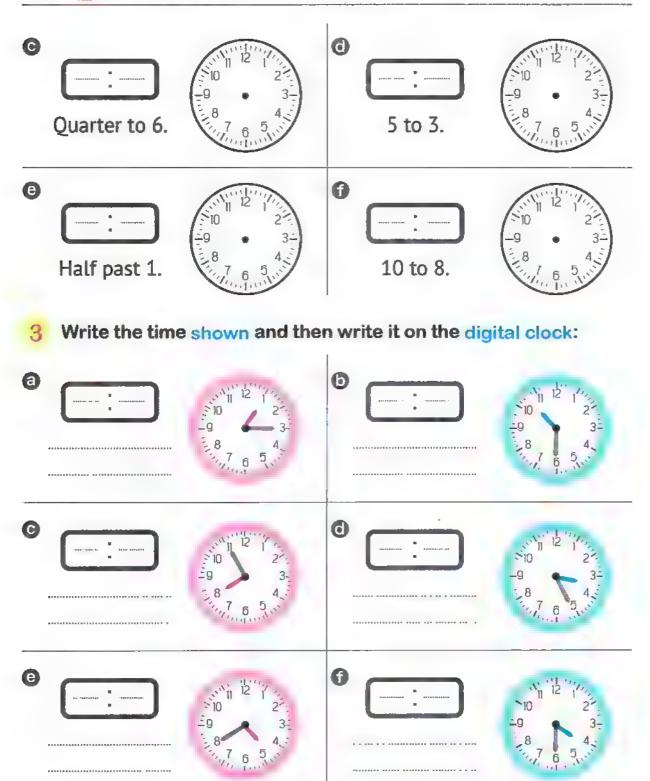
Worksheet |

1 Complete each of the follow	ving:					
a 15 dekaliters =l	iters.					
6 20,000,000+ 600,000 + 50,000	+ 60 + 5	(in Word Form)				
The digit in the Hundred-millie is	ons place in the	number: 7,910,684,325				
64,079 (rounded to the neares	t	≈ 64.000.				
The number that comes right before 9,000,000 is						
2 Choose the correct answer:						
a 200,000 meters =	hectometers.	(200 @ 2,000 @ 20,000)				
6 (5 X 100,000,000) + (5 X 1,000,	000) + (5 X 1,00	0) + (5 X 1) (in Standard				
Form) =						
4 kiloliters and 200 liters =						
The largest number that can be						
is	(764,50	3 305,467 765,430)				
© 50 hectograms =						
3 Complete using (< , = or >):						
② 2,000 centiliters.	20 dekaliters.					
6 100,000 grams.	100 kilograms	5.				
© 2,000,000 decimeters.	200 hectomet	ers.				
② 2 liters.	2,000 millilite	rs.				
4 Find the result:						
a 21,456 + 35,144 =	6 41,047 – 20),500 =				
5 If the weight of Hala is 65 kg and 250 grams.						
What is the weight of Hala in grams?						

Evaluate Time and Scaled Measurement







Complete the following time ratio tables:







ti l	2	()

Weeks	Days				
1	今からから 10-10 の中か田 南本田 本本				
2	0-0-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1				
3	244 2444 244 244 244 244				
4	փրավորդակուտանուտ և ա I մ մ				
5	64 911 94 94 97 14 47 14 47 14 47				
6	y 10 44 44 44 44 44 44 44 44 44 44 44 44 44				
7	400000000000000000000000000000000000000				
8	· 李原·李原·李郎· (1944年) (
9	\$245495599999999				
10					

	-		
Days	Hours		
1			
2	2.0-4.4 4 M M M M M M M M M M M M M M M M M		
3	p. 10 paper 10 date de de de de 10 de 11 d		
4	44014 PROFESSOR STATE		
5	$_{d=Q-2Q+2}$ to q , the space of the delication of the delta d		
6	· · · · · · · · · · · · · · · · · · ·		
7	《·小·《·《·······························		
8	20-40-2-21 20-20-30-40-40-40-40-40-40-40-40-40-40-40-40-40		
9	p q-provide de de de de de de 11 11 11 11 11 11 11 11 11 11 11 11 11		
10	中 医乳腺素 医甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基		

Hours	Minutes			
1	학교 스마스 당수는 대학생들이 되었다. 아니 아니 기			
2	4.4×46450000000000000000000000000000000000			
3	20 E W 中央			
4	수무슨 연구수 보기스 가 라틴슨 및 현장 부지 및 보다			
5	p 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			
6	40 5 40 5 44 44 Am 11 11 11 11 11 11 11 11 11 11 11 11 11			
7	中央 可可分別 medical ボルウス かちゃり 可必 か			
8	化对 化化合物 医乳腺 医乳腺 化甲烷基甲烷 甲烷			
9	·····································			
10	0 d d 0 D 0 d 0 may wynn goly malede de			

	-		
Minutes	Seconds		
1.			
2	· 李·		
3			
4			
5	######################################		
6	**************************************		
7	\$5444++************		
8	医含于瓦达沙洛宁 化化甲醇 化水石 计可		
9	ha 14 4		
10	44-4466466855757994		

Solve the following conversion problems.

(Use the previous time ratio tables):

- One week and three days = days +
- days. days = .
- 4 weeks and 5 days =days +
- days = days.
- ② 2 weeks and 6 days =
- days.
- ① 1 day and 8 hours = hours +
- hours. hours = ...
- 2 days and 20 hours =

hours.

- 3 days and 10 hours=+.

- s 3 hours and 40 minutes = minutes +
- hours.

- 2 hours and 10 minutes =
- minutes =
- minutes.

minutes.

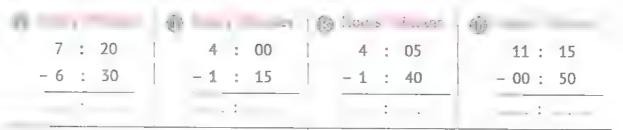
- 1 hour and 25 minutes = _____ + ___ = ___ minutes.
- 3 minutes and 50 seconds = seconds + seconds = seconds.
- 10 minutes and 15 seconds = _____ + ___ = ____ seconds.
- ① 2 minutes and 3 seconds = _____ + ___ seconds.
- Solve the following conversion problems.

 (Use the previous time ratio tables):
 - @ 25 days = _____ weeks and ____ days.
 - **5** 36 days = weeks and days,
 - **©** 48 days = weeks and days.
 - **②** 29 hours = _____ hours.
 - **6** 60 hours = hours.
 - **1** 250 hours = _____ hours. hours.
 - 95 minutes = _____ hours and ____ minutes.
- 6 200 minutes = ____ hours and ____ minutes.
- 1 560 minutes = hours and minutes.
- 65 seconds = _____ seconds.
- 195 seconds = seconds.
- 380 seconds = _____ seconds.
- Find the result of each of the following:
- 7 : 36 + 3 : 45
- b Hours Minutes
 2 : 27
 + 5 : 37
- 6 : 39 + 2 : 50
- 4 : 35 + 4 : 45

- Hours Minutes5 : 47+ 2 : 30
- ### Hours Minutes

 2 : 38

 + 6 : 36
- 9 Hours Minutes
 6:00
 -4:39
- 10: 14
 6: 46



Use the the cycle of an ant to answer the following questions:



- After a queen ant lays eggs, it can take 7 to 14 days for the eggs to hatch and turn into the larva stage. If it takes 10 days for the eggs of an ant to hatch, how many hours is this?
- Adult ants feed larvae with liquids and solid food that helps them grow quickly. Most ants move to the next stage, the pupa (virgin), within to days. If the larval stage took 6 days and 13 hours, how many hours did it take?
- The pupa (virgin) is white in color and resembles an adult ant with its legs and antennae folded and covered with a white or brown cocoon. It transforms into an adult ant within 9 to 30 days. If it takes 21 days for the pupa to become an adult, how many weeks will it take?

	How many hours do ants work for three days?
	Ant workers take 240 naps per day. Each nap lasts one minute. How many hours do ants take for naps?
9	Amir's family used their computer for 3 hours on Saturday, 3 hours on Sunday and 5 hours on Monday. How many minutes have they used the computer?
10	It takes Dahlia 2 hours and 15 minutes to drive to her grandmother's house. How many minutes does she take to drive?
11	Farah was training for the marathon. Her goal was to run for 1 hour and 30 minutes. If she starts running at 8:35 a.m, when will she finish running?
12	The worker ants went out to find food for the colony. The workers left at 6:30 am and returned at 7:42 am. How long did the worker ants take to search for food?

Worksheet

Choose the correct answer:

(3)(4+5)+7=4+(5+7)

Property)

(Associative @ Neutral Element @ Commutative)

The number comes right **before** 3,000,100.

(2,999,999 @ 3,000,990 @ 3,000,099)

2 days and 2 hours = ... hours.

(26 6 122 6 50)

(1,000,003 @ 6,543,201 @ 1,023,465)

② 20 dekameters = _____ meters.

(2 @ 200 @ 2,000)

Complete the following:

a 3:45 + 2:15 = ____ = ____

- 10 minutes and 10 seconds = _____ seconds.
- The value of the digit 5 in the **Ten-thousands** place = times the digit 5 in the Hundreds place.
- **325,215 + 125,247 = ______**
- ③ 39 days = weeks, days.

Draw the hands of the analog clock to represent the time shown:



10 past 4



10 to 8



Half past 2

Salma trains to swim for an hour and 15 minutes.

If she starts training at 5:35, when will Salma finish training?

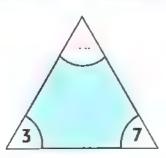
Concept 3.3 Measurement All Around

Exercises on Lessons 7,849

Scaled Measurement & Measuring the World Around Me

1 Complete the triangle of Division and Multiplication Facts:

а



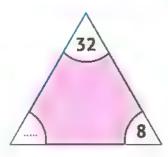
_____ × ___ = ____

..... × =

·

*

b



.....× ,..... =

..... × = ,

.... =

=

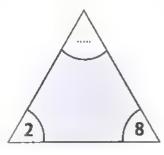
0



_____ × = ____

_____ × ___ = ____

0



.___.× = =

..... × =

.....÷=

Look at the table that lists the size of a variety of ants around the world. Use it to answer the following questions:

Ant type	Size (mm)	Ant type	Size (mm)	
Ghost Ants	1	Army Ants		
Thief Ants	2	Black Garden Ants	4	
Pharaonic Ants	2	Red Harvester Ants	6	
Argentine Ants	3 ,	Ant Warrior	7	
Fire Ants	4	Wood Ants	9	
Sugar Ants	5	The ant with the jaws of the trap	9	
Crazy Ants	3	Panda Ants	8	
African Ants	10	Dinosaur Ants	10	
Sidewalk Ants	3	Leaf-cutter Ants	10	

Draw a Line Plot to show the measurement data. Remember to include a title and key:

ant is the smallest species in size.

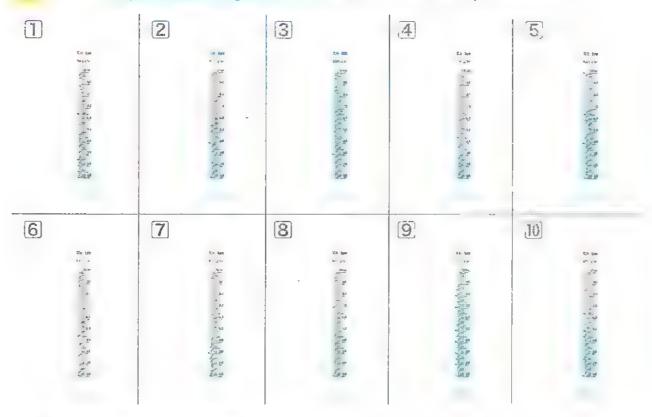
The most common size among ant species is

mm.

The least common size among ant species is

How many types of ants are 10 mm in size?

3 Look at graduated cylinders then answer the questions:



© Complete the following table:

Graduated cylinder	1	2	3	4	5	6	7	8	9	10
Volume of Liquid in Milliliters										,

Draw a Line Plot to show the measurement data.

Remember to include a title and key:

*

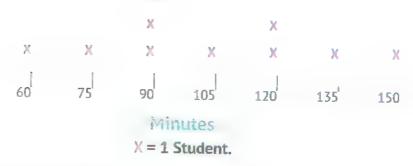
X =

- Answer the following:
 - 1. milliliter is the most frequent volume.
 - 2. milliliter is the least frequent volume.

- 3. The number of graduated cylinders in which the liquid volume is less than 50 milliliters is
- 4. The number of graduated cylinders in which the liquid volume is 50 milliliters or more is

Use the to answer the following questions:

Number of Study Minutes



- What is being measured?
 - What is the scale of a number line?
 - What is the **least time** students spend in studying?
 - What is the maximum time students spend in studying?
- What is the most common amount of time students spend studying?

In the colony, the ants collect grams of food. If the ants consumed grams of food on Monday and grams of food on Tuesday, how many grams of food are left?

Taher's height increased by centimeters in year. He is now 1 meter and 6 centimeters long.

How tall was Taher in one year ago?

HIGH	Number Gense and Operations
7	An ant from a colony walked two kilometers in one day.
	An ant from another colony walked 3,000 meters in one day.
	Which of the two ants went the farthest? What is the difference
	in distance in kilometers?
0	Avy Louisha is known big dog weight 47 kg. When Ali took
8	Ali's cat weighs kg and his dog weighs 7 kg. When Ali took
	them to the vet, he learned that his cat had gained 450 grams
	and his dog had gained 120 grams.
	What is the total weight of the two Pets now?
9	Professor Emad bought for two-liter bottles of soda for
	a picnic for the fourth primary grade.
	If at the end of the party there are 2 liters and 829 milliliters of
	soda left, how many milliliters of Soda did the students drink?
10	The worker ant takes short naps to replenish its energy up to
	and the queen ant can sleep up to 9 hours
	a day.

Which ant sleeps the sagest and what is the difference

between them?

11	Rania measures the length of two rows of ants. The row of ants of the first colony is centimeters long. The length of the row of ants of the second colony is mm. How long are the two rows of ants together in centimeters?
12	Dahlia's dog weighs kilograms. When she took him to the vet, she knew that he gained grams. How many grams does Dahlia's dog need to weigh kilograms?
13	Ms. Basma bought two cartons of milk, each of which weighs wo liters. Her three children drank milliliters on Monday and milliliters on Tuesday. How many milliliters of milk are left?
14	Ziad played video games from to , He is only allowed to play video games for minutes. Did he break the rule? If the answer is no, why? If yes, how many extra minutes did he play?
15	Ahmed has a meter long piece of wood. He wants to cut it into . How long should each piece be in ? What is the length of each piece in .

- 16 Amany swims. She spends half an hour every day swimming. How many minutes does she spend swimming in 5 days?
- 17 Sarah walked 5,000 meters every day for 9 days.
 What is the total kilometers she walked?
- Mary was on a picnic with her family and she counted 10 ants walking together. If each ant weighs 1 gram and carries a weight of 50 times its body weight. What is the total weight carried the ant?
- 19 Ants walk about 5,000 meters every day.

 How many kilometers do ants walk in 6 days?
- 20 Samira is studying for the next Math test. If Samira studies for 30 minutes a day.

 How many hours will she spend studying in 8 days?
- 21 In a colony of ant, ants eat approximately 2,000 grams of food every day. If ants have 10 kg of food stored. How many days do the ants need to consume this amount of food?
- 22 An ant can walk up to 5 km per day. If an ant keeps walking for 20 days.

What is the distance will it walk in meters?

Worksheet

Choose the correct answer	er;
The number 5,010,000 come	es right after
,	(5,010,001 5,999,999 5,009,999)
. The digit in the Millions pla	ce in the number 201,600,000
is	(6 1 1 2)
6 hours = min	(360 144 42)
ore from the	scales of gradation that we see in our daily
	(Telephone @ Tv @ Watches)
lives.	
Three million, thirty thousa	Form) (3,030,300 3,300,300 3,003,300)
	(Property)
8 + 12 = 12 + 8.	
(Cor	nmutative Associative Neutral element)
Complete the following:	
3 days and 3 hours =	hours.
195 minutes =	hours, minutes.
(6 X 100,000,000) + (7 X 10	00,000) + (6 X 1,000) + (7 X 100) + (6 X 1)
=	(in Standard Form)
9 5:12 - 3:50 =	**************************************
The digit 3 in the Ten-mill	ions Place = 100 times the digit 3 in the
place.	
3 Match:	
1 2 days , 12 hours.	6 60 days.
2 8 weeks , 4 days.	60 minutes.
1 minute.	60 hours.
4 1 hour.	60 seconds.
THOU.	
Armana the following n	umbers in an order:

Arrange the following numbers in an						order:
5,005,500	,	5,500,005	,	5,050,050	,	5,005,050
The order:		3		,		7

Unit 4 Area and Perimeter



Exploring Area and Perimeter

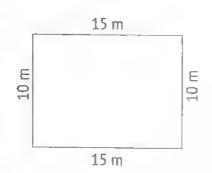
Eversions on Lesson

Marching Ants (The Perimeter)

1 Use two different formulas to solve each	proble	m (Show yo	our ste	eps)
a First Formula =		_		. ,
		8 cm		
Second Formula =	3 CM			ED C
		8 cm		
6 First Formula =		10 cm		
Second Formula =	4 cm			4 cm
1		10 cm		_
⊙ First Formula =				
** ** ** *****************************	Γ-	12 mm		
Second Formula =	7 mm		7 mm	
		12 mm		

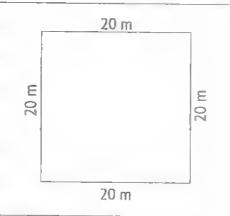
First Formula =

Second Formula =



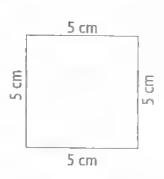
First Formula = _____

Second Formula =



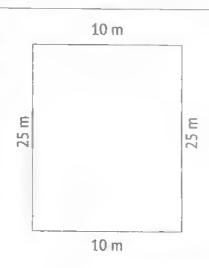
First Formula =

Second Formula =



⑤ First Formula = _____

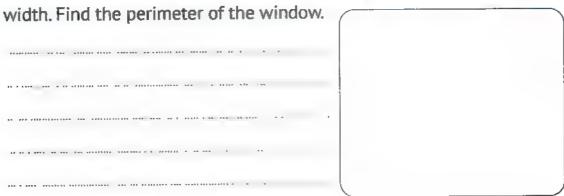
Second Formula =



0	First Formula =		30 mm	
	Second Formula =	30 mm		30 mm
			30 mm	

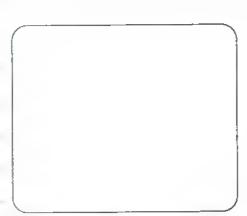
Solve the following perimeter problems: For each problem, draw a rectangle and write the length and width according to the problem:

A window is in the shape of a rectangle, with 60 cm length and 40 cm



6 A square table with a side length of 2 m.

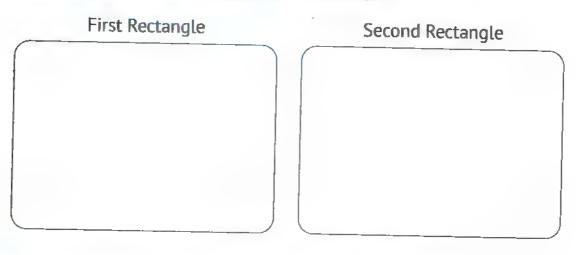
What is the perimeter of the table?



Kamal owns a rectangular farm. It is 1 meters long and 1 meters	
wide. What is the perimeter of this farm?	
A square picture with a side length of Earth cm. What is the perimeter	of
the frame for this picture?	
	_
The football team wants to surround part of the field with ropes to	U
play football. To have enough space, they need a space that is	20
meters long and meters wide. What is the length of the ro	pe
they would need for this part of the field?	

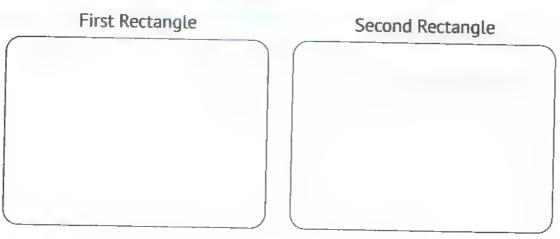
Ahmed practiced walking around a playground.	He walked
a distance of 120 m.	

Draw two different rectangles that can represent his path: (Write the length and width on the drawing).



Saleh owns a rectangular farm. The length of the fence surrounding the farm is 50 m.

Draw two different rectangles that can represent the shape of the farm: (Write the length and width on the drawing).



A square has a side length of 15 cm. Find its perimeter.			
Then draw a with the same perimeter.			
/			
A square has a side length of . cm. Find its perimeter.			
Then draw a with the same permeter.			
Sarah is drawing a line around a square cake. One side of the			
cake is 30 centimeters long.			
How long is the line drawn by Sarah?			

8	Complete the following:		
	Perimeter of the rectangle: P = + + + + +		
	Perimeter of the rectangle: P = (+) X 2.		
	Perimeter of the rectangle : P = (X 2) + (X 2).		
	Perimeter of the square: P =X		
	A rectangle has a length of 5 cm and a width of 3 cm, its perimeter		
	is		
	A rectangle of 15 m length and 10 m width, its perimeter		
	is		
	3 A square with side length 6 cm, its perimeter is		
	A square with side length 20 mm, its perimeter is		
9	Choose the correct answer:		
	Perimeter of the rectangle:		
	$(P = L + (W \times 2) \oplus P = (L + W) \times (L + W) \oplus P = (L + W) \times 2)$		
	Perimeter of the rectangle:		
	$(P = (LX2) + (WX2) \odot P = (L+2) X (W+2) \odot P = (LXW) X 2)$		
	Perimeter of the rectangle:		
	(P = L X W X L X W P = L + W + L + W P = L X W X 2)		
A rectangle has a length of 7 cm and a width of 5 cm. Its perimeter			
	is		
	A rectangle has a length of 6 cm and a width of 8 cm, so its perimeter		
	iscm. (28 @ 14 @ 48)		
	🐧 A square whose side length is 6 cm, its perimeter is		
	(24 @ 36 @ 18)		
	A square whose side length is 10 cm, its perimeter is		
	cm. (40 or 100 or 20)		

Worksheet

1 Choose the correct	answer:	
2,500 centimeters =	meters.	(25 @ 250 @ 25,000)
¹ e Million is the smalles	t number formed from	digits.
		(6 @ 7 @ 10)
A rectangle has a leng	gth of <mark>8 cm and a width c</mark>	of 6 cm. Its perimeter
IS ************************************		(48 🐠 14 🐠 28)
Three hundred million	on and thirty thousand: (in	n Standard Form):
		,300,000 @ 300,003,000)
198 + 214 =	+ 212.	(190 @ 200 @ 214)
2 Complete the follow	ving:	
A square whose sidesP=	are 20 mm, then its perin	meter is:
(4 X 10,000,000) + (2	X 10,000) + (3 X 10) =	• • • • • • • • • • • • • • • • • • •
	e digit 6 in the number 2	
	, + 55) + «···································	
4) 4,500 deciliters =		
Find the product of	each of the following:	
456,258 + 245,051 =		
3 500,120 - 150,058 =	P φ p A + 0334330 NAMASSAyar-yaarddanid ∰	
9 500,000,000 + 2,000,	000 + 400 + 70 + 3 =	* MACC dat with war. •
3 800,000,000 - 1 =		
Arrange the following	ng numbers in a desce	nding order:
450,000 , 500	,400 , 400,500 , <mark>540,00</mark>	0 , 405,000
The order: ,	3 9	,
A painting is a meter	ers in length and 2 me	ters in width. Find the
perimeter of the nee	cessary frame for this	painting.

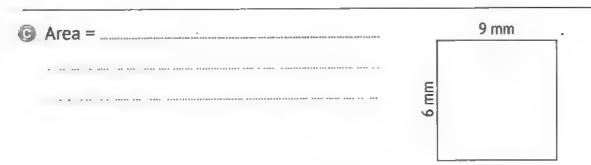
Exercises on Lesson 2

Fill the Space (The Area)

1 Calculate the area of the following rectangles (Show your steps):







① Area =	12 m

Area =		20 m
	20 m	







small anciarm in the form of a rectangle. Its dimensions are centimeters and centimeters. What is the area of this farm? Area =

3	Jannat is designing a work of art and she needs two pieces of
	paper. Each piece must be 6 meters long and 2 meters wide. The
	two pieces of paper will be glued together at the two short edges.
	When she's finished with the artwork, she must decide whether to
	frame it or hang it up and cover it with glass. Jannat needs to know
	the measurements of the frame and glass to make her decision.
	What is the frame size?
	Do you have to calculate the area or the perimeter to find this measurement?
	What is the glass size?
	Do you have to calculate the area or the perimeter to find this measurement?
	The Mark College to constitute to the female and the college of th
	W by a phillips of a princip and and the second of the sec
4	You have 36 squares of rugs to be arranged on the floor in a rectangular
	form. Draw two possible arrangements with measurements of
	length and width. What is the perimeter of each arrangement?
	What is the area?

Perimeter =	Perimeter =
In a science project.	students are creating an ant fa
enclosure, which is	neters long and 🧢 meters high. Draw
enclosure, which is renclosure with the dim	neters long and meters high. Draw nensions. Then find the perimeter and a
enclosure, which is renclosure with the dimensional Perimeter =	has an area of square meters.

	_		
8 Draw a square of an area of 25 cm ² .			
Then find its perimeter. (Write the			
dimensions on the drawing).			
9 Complete the following:	_		
Area of the rectangle: A =	****	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	🖢
• Area of the square: A =	######################################	· ~~~~=================================	nd was necessary and apply of the property of
A rectangle has a length of 9 cm and a w	idt	h of 3 cm.	Its perimeter is
cm, and its area is			
A rectangular piece of land with a length			
10 meters, then its area is			
(a) In the opposite figure, there are two conju	oine	ed rectand	iles.
The sum of their areas:			
	Г	3 cm	7 cm
Dec. 14.45 (1904) 4 (1904) 15 (1904) 15 (1904)	3 CH		
Choose the correct answer from the b			
a Area of the rectangle:		* * 10 * ** * * ***** *	* * * ******** * ***** * *** #
	+ \	W 🐠 A = L	- W
• Area of the square:		\$= 000006.00	
(A =	L)	X 2 🐽 A =	L – L 🐽 A = L + L)
A square with sides of 7 mm, its surface ar	ea	=	mm²,
			(14 @ 49 @ 28)
• A rectangle has a length of 8 cm and a wid	dth	of 4 cm. l	ts surface area
is cm².			(32 00 12 00 24)
			,
The total area of the opposite figure is			
40 cm ² . The area of rectangle (2)		<u>-4 cm</u>	
= =====================================		(1)	(2)
(24 @ 16 @ 40)	' <u>L</u>	(-)	(4)
(24 @ 16 @ 40)		· ·	

Worksheet

1 Choose the correct answer	r:		
A square with side length	m, its area is	** 94.94	cm ² .
			(32 @ 64 @ 16)
The value of the digit in the	e Ten-thousands	place =	
		(70 🀠	7,000 @ 70,000)
400 Millions + 40 Thousands	+ 4 =		
	(400,400,400	400,040,0	004 4,000,404)
A rectangle has a length of	cm and a width	of cm.	lts perimeter
IS :		(18 cm 🐠	18 cm ² @ 9 cm ²)
= 45 + 34 = .	(45 + 3 + 4 1 4	+5+3+	4 @ 45 + 30 + 4)
2 Complete the following:			
A rectangle is cm long and	d cm wide. A =		
45,218 ≈	. (Round	ded to the	nearest ()
The number 45,100,000 com	es right after th	e number	
A square has an area of cr	m², the length of	its side is	
	kilometers.		
3 Complete using (<, = or >):		
3 45,025,000 40,525,00	00.		
(3) 4 X 100,000,000 4 X 1	1,000,000,000.		
4,000 grams40,000 d			
② 200 millions 2,000,00			
Calculate the perimeter a	nd area of	4 cm	8 cm
the corresponding figure:	C. C.	(1)	(2)
② Area =	4	(1)	(2)
⑤ Perimeter =			
In a glass company, a piec			
the area of the piece of gla		-	

Exercises on Lesson 3

Something Is Missing!

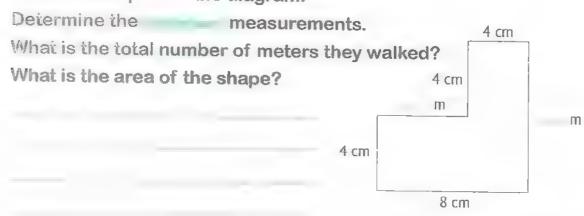
1 Complete the following table:

	Length	Width	Perimeter	Area
a	8 cm	5 cm		
0	10441100000000000000000000000000000000	4 m	20 m	
G		7 m	26 m	
0	15 mm	***************************************	50 mm	
0	20 mm	4.013.610.000.00750.000.000.000.000.000.000.000	60 mm	
0	404 fr. w 444 9 9 9 8 8 8 8 6 9 7 8 4 5 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8	6 cm	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	42 cm ² .
9		· 7 cm		63 cm ² .
0	6 dm	AP 1000000000000000000000000000000000000		24 dm ² .
0	. 8 dm	фурмуничүн үүлийн хайн хүйл бай		40 dm ² .

2 Complete the following table:

	Side Length	Perimeter	Area
;	4 cm		
10	7 cm		
0		32 m	
(d)	Tilliand) and his objective address through	20 m	**************************************
(3)			36 mm²
			81 mm²

Some fire ants leave the hill to search for food. They went meters east from the hill and then turned around and walked meters north. A big tree got in their way, so they walked around it. When they passed the tree, they went west for another meters and then south for meters to return to the hill. Look at their path in the diagram.



4	Tahani wants to put a square frame around her father's picture.
	The area of the picture that she wants to frame is 144 square
	centimeters. What is the width and length of the frame?
	Draw the frame and show your steps.
	VIII.0 11 TO 7 TO 1007 M. T. 7 TH M. TEV 1007 M. T
	Man 2 / 1 M 2 2 m (0 M 2 M 1 1 1 1 1 1 2 M 2 M 2 M 2 M 2 M 2
	1 + 1 mm er 1 ml mar ent et e mil 100 mm e eren mannet y 1 mm mer.
5	Soliman works on a farm. The fence around the goats fell off, so
Ĭ	his uncle asked him for more wires to build a new fence.
	He told him that the fence is 25 meters wide and that he needed
	to get 110 meters of wire to encircle the entire space.
	What is the length of the unknown side? Draw the fence and
	find the unknown length.
	4 H (1115 C 1 1111 H H H H H H H H H H H H H H H
	4 × 10 × 10 × 10 × 10 × 10 × 10 × 10 × 1
	MA NO (10-11- 1 PE-1/10 NO P PO 10-10-10- PE 10-7 AND NO A MARK (P N NO 40
6	A rectangular mirror with an area of 900 square centimeters.
U	The mirror is 45 cm long. what's its width?
	A PARK PROPERTY OF THE PER PER PER PER PER PER PER PER PER PE
7	Sameh's book is 30 cm long. The cover of Sameh's book has
	a perimeter of 100 cm. What is Sameh's book width?
	Mar 111 (2) (1) (1) (1) (1) (1) (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4
	(1 to) (to pe th) to to 1 to) the extra to 1 to

Choose th	ne correct	answer from	the	brackets:
-----------	------------	-------------	-----	-----------

A rectangle has a perimeter of cm and a length of	cm, then its
width is cm.	(3 10 40)
A rectangle has an area of cm ² and a width of cm.	Its length
is cm.	. (6 9 25)
A square has a perimeter of cm, the length of its sid	le is cm.
	(5 · 4 · 10)
A square has an area of cm ² , the length of its side is	cm.
	(9 4 6)
A square has a perimeter of cm, then its area is	cm².
	(9 36 144)
A square has an area of 25 cm ² , its perimeter is	cm.
	(5 - 20 - 100)

9 Complete the following:

A rectangle has a perimeter of cm and a length of cm, then its	
width iscm.	
A rectangle has an area of cm ² and a width of cm, so its length	İS
cm.	
A rectangle has a perimeter of cm and a length of cm, then its	
area is cm².	
A rectangle has an area of cm² and a width of cm. Its perimeter	is
cm.	
A square has a perimeter of cm, the length of its side is	cm.
A square has an area of cm ² , the length of its side is	cm.
A square has a perimeter of cm, then its area is cm ²	•
A square has an area of cm ² , its perimeter is cm.	

Worksheet 📗

1	Choose	the	correct	answer:
---	--------	-----	---------	---------

a A square has a perimeter of 12 cm, then its area is _____ cm².

 $(3 \odot 9 \odot 24)$

The largest 8-different-digit-number is

(10,000,000 @ 99,999,999 @ 98,765,432)

 Θ 5 + 0 = 5

(---- Property)

(Associative of Commutative of Additive Neutral Element)

d 25,452 ≈ 30,000. (Rounded to the peacest

(Rounded to the nearest _____)

(1,000 of 10,000 of 100,000)

The best unit for measuring the **height** of a school is ______.

(kilometers or meters or centimeters)

2 Complete each of the following:

- a A rectangle has an area of 45 cm² and a width of 5 cm, then its perimeter is _______.
- **5**,065 cm = ____ m, ___ cm.
- **3** 245 + 218 = ____ + 245.
- **6** If: $\chi + 245 = 786$, then $\chi =$ _____.

3 Calculate the perimeter and area of each of the following shapes:

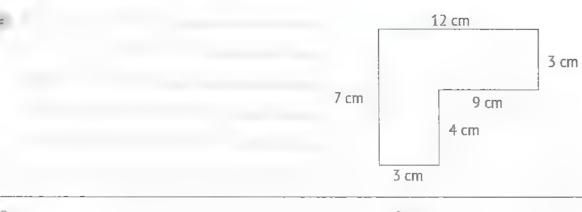
20 mm 8 cm 4 cm

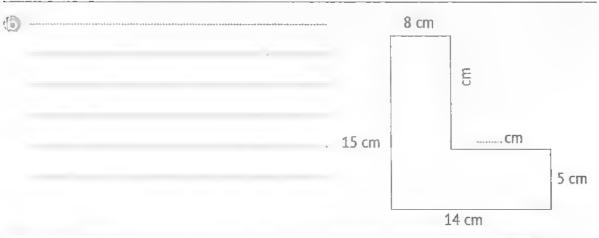
A city in the shape of a rectangle. It is 4 kilometers wide and 8 kilometers long. What is the area of this city?

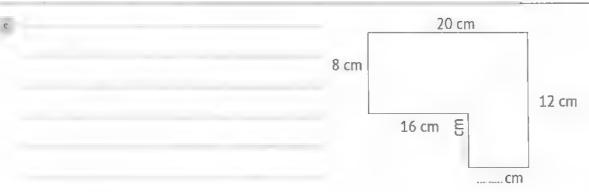
Exercise on Lesson 4

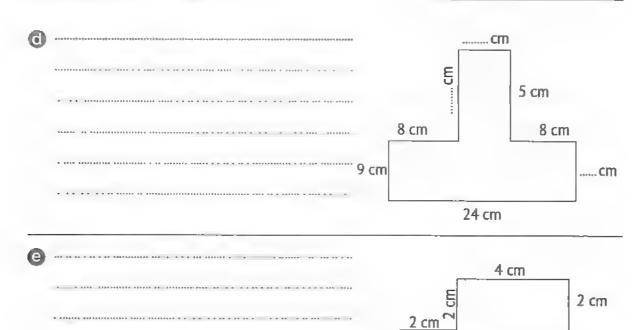
Odd Shapes

Divide each of the following shapes into or and then calculate the and of the corresponding figure:





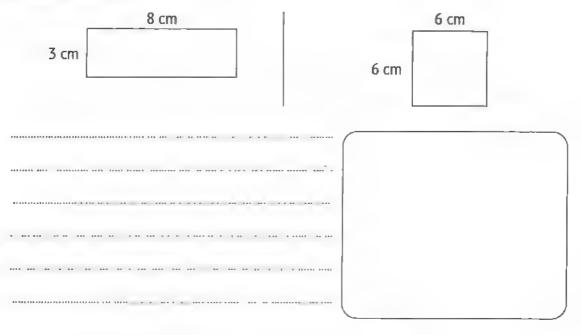




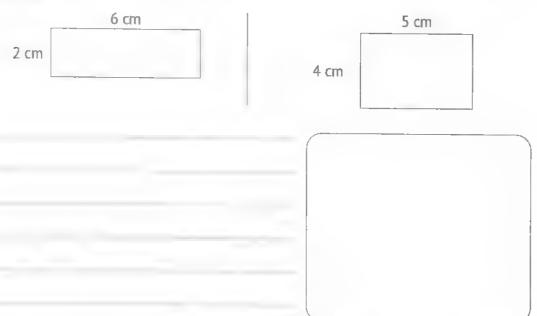
Combine the following two geometric shapes to form one combined shape. Calculate the area and perimeter of this shape: (Draw your geometric figure and write the measurements on the sides).

2 cm 2 cm

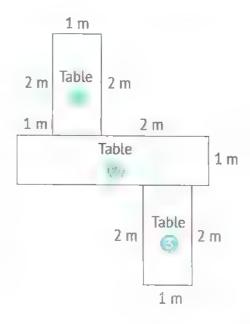
4 cm



Combine the following two geometric shapes to form combined shape. Calculate the and shape: (Draw your geometric figure and write the measurements on the sides).



A company pushes tables together for a team meeting. of the shape made by the tables? Explain the What is the steps of the solution.



Exercises on Lesson 5

Growing Dimensions

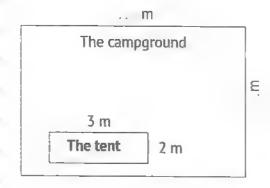
1	A rectangle is a centimeters wide. Its length is 4 times its width.
	Draw the rectangle, write the dimensions and find its area and
	perimeter.
	Area =
	to the little and to the same of the little and the same of the
	Perimeter =
2	A rectangle is 12 centimeters long. Its width is one-third of its
	length. Draw the rectangle, write the dimensions and find its area
	and perimeter.
	Area =
	Perimeter =
3	Adam's rectangular garden has an area of 20 square meters.
	The longest side of the garden is 5 meters. Draw Adam's garden.
	The length and width of Dahlia's garden is three times the length
	and width of Adam's rectangular garden. What is the perimeter
	of Dahlia's garden?
	(1000) - 1

The area of the sand playground next to Mohamed's house is square meters. The longest side is meters long. Draw this sand playground.

The length and width of the sand playground where Mohamed is playing in the garden is ____ the length and width of the playground next to the house. Find the each of the two sand fields.

Ramy and Salah went on a camping trip. The diagram shows their campground. If the length of the camp ground is the length of the tent and the width of the campground is times the width of the tent.

How much space will they leave to set up the rest of their camping gear?

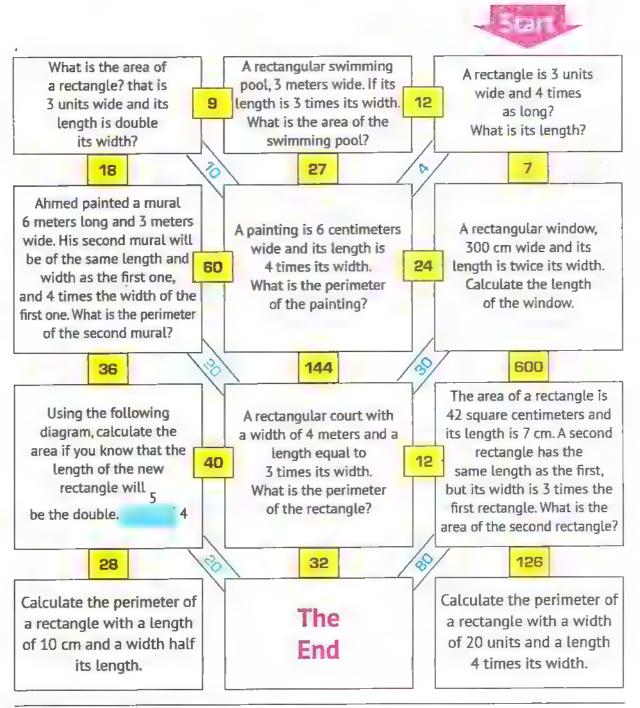


The Maze

Your goal is to complete the game from the "Start" to the "End".

Start the game from the "Start" sign.

To move to the next space in the game, the number in the path must be a solution to the space you are in. Use the arrows to show the path you took. When you reach the end, you have completed the maze. Good Luck!



1 Choose the correct answer:

Complete the following:

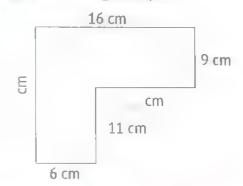
A rectangle has an area of cm² and a length of secm. Then its perimeter is _____.

--- The number 36,000,250:

(in Word Form)

- - ∴ The number 7,145 ≈ 7,100. (Rounded to the nearest
- A square whose sides are 100 mm, its area is cm².

Calculate the and of following shape:



The area of a rectangle is all square centimeters and its side length is pendimeters. The second rectangle has the explene as the rirst, but its width is all the second the first rectangle. What is the pendimeters and its side rectangle?

Mathematical Operations and Algebraic Thinking

5) Multiplicación de a Malarmatio

Develop Multiplicative Comparisons

Exercises on Lesson

Understanding Multiplicative Comparison

1 Complete as in	the example:				
(Ex. If $5 \times 3 = 15,1$	hen 15 is triple 5.	o	15 is 5 time	es 3.	
a If $7 \times 6 = 42$,					
then 42		or	42		7.
b If $3 \times 8 = 24$,					
then 24	8.	or	24	жүү±6036а436ачаа4а44445, бабаба балаші быйич	. 3.
© If X					
then 36 is 4 tir	nes 9.	or	36	d den rran d deudes van de beda d 2 d d de d de 2 d d de 2 d de 2 d d de 2 d d d d	4.
6 IfX					
then 21 is tripl	e 7.	0	21	AMAN NANYANYAY KAASANA MANSKANISPANYÄÄNEÄSÄ	3.
(a) If 2 X 8 = 16,					
thenis	double	Or	, is 8	3 times	
1 If $7 \times 8 = 56$,					
thenis	8 times	or		7 times	maijing d
2 Compare betwe	een the following	numbe	ers:		
a 18 and 9 ⇒ 18	***************************************	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		9.	
ⓑ 25 and 5 ⇒ 25	Mr. arthuragen municipality	1 dans 11 miles 4 leterated 4 det d + det d+ d	1945-pangsaga, mada magapitasaga saga magapitas ka	5.	
② 27 and 3 ⇒	r e (a arrigra ligara e (a a a ara a a ada da barra e di dri e e (a ra b de dravidad e eleven-barry e di espekt			Linea de	
② 28 and 4 ⇒				vecer di	

- = 40 and 8;
- 63 and 9:
- 2 72 and 8:

3 Complete:

$$\circ$$
 2 + 2 + 2 + 2 + 2 = ... X = .

(a)
$$7+7+7+7+7+7+7+7=$$
 X

Complete each of the following using the

0	is	times	9		9		9		9	9
(1)		times			4				4	
(3)	is	times	6		6	6		6	6	6
7	is	times		8			8			8
0-	is	times .	3	3		3	3	3	3	3
	is	times .		5		5		5		5
2	is	times .	7	7	7	7	7	7	7 7	7 7
3	is	times .	End	2	4	2	2	2	7	2 1

5 D	ivide the Stri	ip Diagra	ms acco	rding to	the nun	nerical se	entence:
(3)	28 is seven	times 4.					
0	15 is triple	5.					
0	18 is six tin	nes 3.					
0	36 is four ti	imes 9.					
0	48 is eight	times 6.					
0	56 is eight :	times 7.					
0	20 is four ti	imes 5.					
0	12 is six tin	nes 2.			_		
6	hoose the co	orrect an	swer:				
a	To compare be	etween 12	and 3:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	P04020202 4		
	(12 is	three time	es 4 🗿 12	is four t	imes 3 🐽	12 is thre	e times 3)
0	If 5 X 6 = 30, t	hen	nagenaurus ur nere entre évid bés.				
		(30 is six t	imes 5 🎟	30 is five	e times 5	⊙ 30 is si	x times 6)
0	"24 is triple 8"	" is a num	erical sen	tence to	compare	between:	
	400-10040000000000000000000000000000000	and	enegates energial elements de	(3 a	nd 8 🐽 2	4 and 3 🐠	24 and 8)
0	4+4+4+4+	4 =	***************************************		(4)	X 4 @ 4 + !	5 a 4 X 5)
e	6+6+6+6=		, emperatorista =		(3.)	X 8 @ 6 + 4	4 <u>or</u> 6 X 6)
•	5 X 6 =	11 15-1-1-1		(6 + 6 -	+ 6 +6 🐠	10 +10 +1	0 @ 5 + 6)
9	3 X 9 =				(9 + 9 +	9 💿 20 X	7 🐽 3 + 9)
0	The following	Strip Diag	jram repr	esents		-	
	3	8	8	8	8		

(32 is four times 8 @ 32 is eight times 4 @ 32 is eight times 8)

		5	5			
(30 is six tim	es 5 · 3	0 is fiv	e times 6	32 is fiv	e times 5)
Which of the	following St	rip Diagı	ams re	presents '	'12 is four	times 3".
		3	3	3		
		(B	l		
			5	3		
		(P			
		4		4		
7 Complete the	following:					
To compare be	etween 6 an	d 2: (6		46 96 1161	2).	
To compare be	etween 8 an	d 4 : (8			4).	
"30 is triple 1	0 " is a sente	nce to c	ompare	e between	a	and
"36 is four tim	nes 9" is a se	entence t	to com	pare betwe	een:	and
₩ If 8 X 6 = 48,	then "	is s	ix time	S	99 a	
• If $.7 \times 3 = 21$,	then "21			7".		
9)9+9+9+9+	9+9=	. >	(1944 B		
6+6+6+6+	6 +6 = 4 X					
5 X 8 =	4	+		+	+	
3 4 X 3 =	tor below to be desirable colors and	+ .	-\$4-\$-\$-\$-\$-\$-\$-\$-			
The following	Strip Diagra	ım repre	sents: "	i	s six times	nhousewage #
		4	4	4 -4		
The following	Strip Diagra	m repre	sents: "		s triple	a
				- 22.		direktokonbenenesek fi

The following Strip Diagram represents

Choose the correct answer:

The greatest 8-different-digit-number is _____

(99,999,999 @ 98,765,432 @ 10,000,000)

(triple \circ six times \circ double)

© 85 + 99 = 84 + _____ (98 @ 100 @ 85)

1 The length of a rectangle is double its width. If the length is 4 cm, then the area of the rectangle = ____ cm². (32 💿 8 💿 12)

e 6 X 3 = _____

 $(9+9 \odot 6+3 \odot 6+6)$

2 Complete the following:

a The value of the digit 7 in the number 45,789,024 is ______.

(b) If 28 is **seven times** 4, then: _____ X ____ = 28.

© 14 + (16 + 35) = (_____ + 16) + ____ . (____ Property)

a 7 + 7 + 7 + 7 + 7 + 7 = _____ X _____.

(2) 8 X 30 = _____ X 10.

3 Complete using (< , = or >):

a 78, 064,002

78,604,002.

(7 X 10,000,000) + (6 X 10,000) + (5 X 100)

70,060,500.

9 9 + 9 + 9 + 9

6+6+6+6+6+6.

6 8 X 7

9 X 6. **(2)** 175 – 99

174 – 100.

Complete each of the following using the Strip Diagrams:

2 2 **a** is times 2 2 2 8 ◐ is times 8

is times 3 3

on 2&3

a strong

8

Write	for the follo	wing comparisons.
	(Use a	to represent the unknown number):
A number	is 5 times 3:	(
A number	is 7 times 6:	(
	is 3 times 8:	(
A number	is 4 times 9:	(
A number	is double 6:	(
1 36 equals	5 5 times a number:	(
28 equals	7 times a number:	(
35 equals	5 times a number:	(
48 equals	6 times a number:	(
49 equals	s times 7:	()
64 equals	times 8:	(
42 equals	times 6:	
(ii) 36 equals	times 4:	()
Write the	,	that represents each of the following
sentence	s. (Use a to	represent the unknown number):
- Ahmed's a	age is Ma	aha's age. If Maha is years old, what is
Ahmed's a	age?	

A square with sides of 3 cm.

Write an equation showing the perimeter of the square (P).

A rectangle is of 6 cm length and 4 cm width.

Write an equation that shows the area of the rectangle (A).

- Hazem has five times the money that Karim has.
 If Hazem has 45 pounds, what is the amount of money with Karim?
- If the price of one pen is 3 pounds, what is the price of 7 pens?
- 3 Find the value of the unknown in each of the following equations (Solve the equations):

A CONTROL OF THE PROPERTY OF T

$$\bigcirc$$
 m \times 9 = 45 , m=

(a)
$$k = 3 \times 6$$
 , $k =$

$$\mathbf{0} \mathbf{q} = 6 \times 4 \quad \mathbf{q} =$$

Write follow	ving comparisons:
(Use . io represent the	e unknown, then find the value of it):
A number is equal to 6 times 3.	Equation:
	Solution .
61 A number is equal to 7 times 4.	Equation :
	Solution:
A number is equal to 3 times 8.	Equation:
	1 1 (C.)
 A number is equal to 5 times 9 	Equation :
	Solution :
- 45 equals 9 times a number.	Equation .
	Solution .
40 equals 5 times a number.	Equation :
	Solution:
° 12 equals 3 times a number.	Equation =
	Solution :
3 21 equals 7 times a number.	Equation .
	Solution .
Complete the following:	
The equation that represents "	equals intes a number".
is	
The equation that represents "	equals times a number".
IS	
The equation that represents "	a number equals . 😇 🗎 ".
15	

0	The equation that represents "a number equals seven times 3".							
	is	*******		414111114 1				
0	If $6y = 42$,	then	y	=	······································		
0	If 28 = 4 X m	3	then	m	=			

- Read the word problems and think about the comparisons, then write the multiplication equation that represents each problem: (Use a symbol to represent the unknown number. Then solve the equations):
 - a Rashad's team scored 9 goals in football. This is 3 times the number of goals scored by Yassin's team.

How many goals did Yassin's team score?

Equation	•	
Solution	A	

18 Wafaa has 18 pounds. This is equal to 3 times what Hana has.

How much does Hana have?

Equation	•	
Solution		

Saleh has 15 apples and his sister Hala has 5 apples.

How many times does Saleh have the same number of apples as Hala?

Equation

Solution

9	The height of one of a residential tower is meters and	d the height
	of a tree is meters. How many times is the height of th	_
	tower as the height of the tree?	
	Equation :	
	Solution :	
(3)	Hani is twice as old as his brother.	
	His brother is 8 years old. How old is Hani?	
	Equation :	
	Solution :	
		ne distance eters from the k?
	Choose the correct answer from the brackets:	
	Sameh is the age of his brother. His brother i	s vears old
	Which of the following equations is used to know the ag	
	(a = 3 + 4 a a = 4 -	
	Sarah and her sister peeled some oranges. Sarah peeled	,
	Sarah's sister peeled as many oranges as Sarah. W	
	following equations can be solved to find the number of o	
	Sarah's sister peeled? $(n \times 3 = 6) n = 3 \times 3$	
τ	An aquarium contains red fish and as many blu	
	How many blue fish are in the tank?	
	If: $3\varkappa = 9$, then $\varkappa = $	
	If: $6 \times y = 24$, then $y =$	(3 @ 27 @ 12)
	The equation " $m = 4 \times 2$ " represents a number equal to	(18 @ 30 @ 4)
	·	4 o double 2)
	(four times 2 on four times	+ w doubte 2)

Choose the correct answ	er:	
Three billion, twenty-five the	iousand, tw <mark>o hund</mark>	red:
(in Standard Form) (3,	025,200 🍑 3,000,0	025,200 @ 3,000,000,225)
6 If 6 x m = 18, then 18 is	m.	
(thi	ree times 🐠 six tin	nes 🍑 two times)
A square with side length L		
the perimeter is:		
1 A square has an area of 36	cm ² , then its perin	
		(24 @ 12 @ 81)
(3) 8 + 8 + 8 + 8 =	W	(8 X 8 1 8 X 4 1 8 + 4)
Complete the following:		
The value of the digit 5 in t	he Hundred-millio	ons place is
15 If 24 is six times a, then 24	4 =	
6 16 + 35 = + 1		(Property)
1 If 45 = 9 X u , then 45 is		
(3 X 100,000,000) + (2 X 1,0	000,000) + (8 X 10,	
THE STATE OF THE S		(in Standard Form)
Arrange the following nu	mbers in an asc	ending order:
450,005 , 850,6	200,755	, 360,450
The order:,		,
Write an equation to com	pare each of th	e following:
1 2 and 4: Equation :		
5 20 and 5: Equation:		
8 and 16: Equation:		
3 54 and 9: Equation :		torialistadistation in the special state of the special state of the special state of the special spec

Properties and Patterns of Multiplication

on 1 4,5 6

perily of Monte Alver MARKAMAN IN THE & DOCUMENT PROPERTY TO

Find the result of each of the following:

- 9 X 0 ______
- (a) 4 X 10 =
- © 7 X 1,000 =
- 12 X 20 =
- 15 X 100 =
- 6 50 X 600 =
- 300 X 700 =
- 4 150 X 100 =

- (a) 1 X 6
 - @ 0 X 9 =
 - € 6 X 100
 - (f) 30 X 10
 - (i) 40 X 100 =
 - 60 X 400 =
 - @ 30 X 50
 - ⑤ 500 X 2,000 =
 - 12 X 10,000 = .
 - 6 564 X 1,000 =

Complete the following:

- 3 8 X = 3 X 8.
- (a) X 2 = 2 X 6.
- (a) X 1 = 9.
- $= 7 \times = 0.$
- X 10 = 80.
- X = 1,000 = 9,000
- 1 X 30 = 1,200.

- (i) 9 X 7 = X 9.
- 12 X 6 = 6 X
- 1 X = 4.

$$\times$$
 5 = 0.

- 5 X = 500.
- X 10 = 400.
- (i) 60 X = 60,000.

-							
0	#P 000000000000000000000000000000000000	X	1	00	=	1.7	′OO.

$$\mathbf{0}$$
 X 50 = 30,000.

3 Complete using (<, = or >):

200 X 50

4 Match:

5 Find the value of the unknown (x) in each of the following:

- (a) If $\chi X 10 = 200$
- then $\chi =$
- **6** If 30 X $\chi = 6,000$
- then $\chi = \dots$
- **G** If $\chi \times 500 = 20,000$
- then χ =
- (a) If $\chi X7 = 7X9$
- then $\chi = \dots$
- (a) If $60 \times 30 = 30 \times \chi$
- then χ =
- **f** If 200 X $\chi = 100,000$
- then χ =

	The length of an ant is about 2 mm. If the length of the turtle is the length of the ant. Find the length of the turtle.
1	Ahmed saves 50 pounds every month. How much will he save after six months?
- Area	The price of one pen is 90 piasters. How much is 20 pens?
-100	The bookcase in a library contains 5 shelves, each shelf has 30 books. How many books are there in the bookcase?
10	Alia has marbles. Write an equation using the Commutative
	Saleem has A erasers. Write an equation using the Commutative of the C

Choose the correct answer:

(a) 50 X = 2.000.

(4 0 40 0 400)

(1) If **a** X 6 = 24, then **a** = _____.

(4 **o** 6 **o** 24)

The value of the digit 6 in the **Millions** place = _____ times the value of the digit 6 in the **Thousands** place. (100 or 1,000 or 10,000)

The equation that shows "48 is six times m" is ______.

 $(8 + m = 48 \odot 8m = 48 \odot 48m = 6)$

(3) 80 + 0 + 0 + 0 + 5 =

(800,005 @ 805 @ 85)

2 Complete the following:

The largest 7-different-digit-number is ______.

6 60 X 5,000 =

 The number that comes right after the number is 450,000,000.

X 20 = 10,000. © 8 X = 8.

3 Find the result of each of the following:

© 80 X 50 =

30 X 1,000 =

4 The height of a tree is 2 meters, and the height of one of the residential buildings is 10 times the height of the tree. How tall is the residential building?

8

11 11 11 11 11 11 11

788 on

applying Patterns in Multiplication

Find using the

$$\otimes$$
 8 X 5 X 5 = (X) X = X = . . .

Complete the following:

3 Complete the following:

a 6 X = 600.

 \times X 5 = 2.000.

6 8 X = 400.

3 X 100 = 10,000.

a 40 X = 200.

9 X = 36.000.

9 5,000 = Hundreds.

1 200 = ... Hundreds.

1 6,000 = Tens. = 20 Thousands.

1 = 400 **Hundreds**. **1** = 5,000 **Tens**.

4 Use Decomposing Numbers and the Associative Property of Multiplication to solve each of the following:

= 6 X (_____ X ____) = (6 X ____) X ____ **a** 6 X 20

= x =

= ____X (2 X _____) = (____X X ____) X _____, **⑤** 9 X 200

2 7 X 3,000

= , , **X** =

3 2 X ... = X (8 X 10) = (... X) X ...

= x ... =

= x ... =

= 45 X 100 =

5 Complete the following:

6 Choose the correct answer:

(a)
$$7 \times (3 \times 5) = ($$
..... $\times 3) \times 5$.

$$(7 \odot 5 \odot 3)$$

7 Complete using (< , = or >):

8 Match:

- 1 (2 X 5) X 6.
- 2 8 X 30.
- 3 24 X 100.
 - 4 800 X 50.
- 53X(6X5).

- @ 3 X 800.
- 10 X 6.
- 400 X 100.
- 3 18 x 5.
- 24 X 10.

Use the number of pens in the picture.

to calculate the



Use the number of books in the picture. to calculate the



11	Emad bought 5 packs of water bottles. Each package contains
	4 rows of bottles, each row has 3 bottles. Use the Associative
	Property of Multiplication to calculate the number of water
	bottles Emad bought.
12	The library has 10 bookcases, each bookcase has 5 shelves
	and each shelf has 8 books. Use the Associative Property of
	Multiplication to calculate the number of books in the library.
*	

1 Choose the correct answer:

8 X 300 = 24 X

 $(10 \odot 100 \odot 1,000)$

Three hundred thirty million, three thousand =

(in Standard Form) (300,030,003 @ 330,000,030 @ 330,030,000)

40 X 50 = 2 X

(10 @ 100 @ 1,000)

50 X 2 = 10 X

(10 100 100 1,000)

: if 45 = 9a, then $a = \frac{1}{2}$

 $(45 \odot 9 \odot 5)$

2 Complete the following:

Hundreds = 400×50 .

The value of the digit 9 in the **Hundred-millions** place is

(8 × 100,000,000)+ (6 × 100,000)+(3 × 1,000)+ (4 × 100)+(2 × 1)

(in Standard Form)

8 X 30 = 8 X (... X 10) = (8 X 3) X ___ = X 10 = ____

Arrange the following numbers in an ascending order:

450,000,002 . 405,200,000 , 450,200,000 , 405,000,002

g - e' - e - er - milita litalin - me - 1 g de de l'adelle en adelle administration g andi-parendistration de representation de

The order:

Use the Associative Property of Multiplication to calculate the number of fruits in the pictures:





Usir 6 Understrong Eusten and Mütphy

Concept 6.1 Understanding Factors

Eurales on Lessons 1&2

Identifying Factors of Whole Numbers & Prime and Composite Numbers

•	ch number using the Rainbow and the
Factor Diagrams:	
a 10: The factors of 10 are:	
6 12: The factors of 12 are:	
© 15: The factors of 15 are:	
d 18: The factors of 18 are:	
© 20: The factors of 20 are:	

ii) 24:		
The factors of 24 are	2:	
36:		
The factors of 36 are	<u></u>	
3 40:		
The factors of 40 are	e:	
f) 17:		
The factors of 17 are	2:	
A 8.		
1) 45:		
The factors of 45 are	à:	
Pin al		P 44 .
(Use the method you	of each number of the uprefer):	rollowing:
13	⑤ 60	© 28
The factors of are:	The factors of 60 are:	The factors of 28 are:

_	14	© 50					0	32				$\overline{}$
•	The factors of 14 are									s of		
3	© Count by skipping		1	2	3	4	5	6	7	. 8	9	10
	numbers you say w		11	12	13	14	15	16	17	18	19	20
	(Write the multiple	es of 2).	21	22	23	24	25	26	27	28	29	30
		9 9 9	31	32	33	34	35	36	37	38	39	40
	. 9-1-10-9-0000-9-0000-9-0		41	42	43	44	45	46	47	48	49	50
		9 9 9	51	52	53	54	55	56	57	58	59	60
		413442 Q 42244471 Q 411717727 Q	61	62	63	64	65	66	67	68	69	70
			71	72	73	74	75	76	77	78	79	80
			81	82	83	84	85	86	87	88	89	90
		**************************************	91	92	93	94	95	96	97	98	99	100
	Count by skipping	5s, shade the	1	2	3	4.	5	6	7	8	9	10
	numbers you say w	*	11	12	13	14	15	16	17	18	19	20
	(Write the multip	oles of 5).	21	22	23	24	25	26	27	28	29	30
		9 9	31	32	33	34	35	36	37	38	39	40
			41	42	43	44	45	46	47	48	49	50
		,	51	52	53	54	55	56	57	58	59	60
	***************************************		61	62	63	64	65	66	67	68	69	70
			71	72	73	74	75	76	77	78	79	80
		***************************************	81	82	83	84	85	86	87	88	89	90
			91	92	93	94	95	96	97	98	99	100

Count by , shade
the numbers you say while
counting. (Write multiples of
10).

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Write the common multiples of and :

Write down of the following numbers. Then write if the number is a prime number or not:

Number	Factors of the Number	Prime Number or Not
. ∌ 6		
.i) 19		
J 31		• •
€ 14		
€ 30		
9 25		
1 23		
Th 11		

5 Complete with a tick (/) under the factors of the number:

Manushan	The Factors of the Number										
Number	2	3	6	9	5						
8	_										
9											
25											
12		-									
15											
10											
18											
27											
28											
32											
30											
36											
45											
60											
90											

6 Use the opposite table to complete:

Circle the numbers: (2,3,5,7). Then cross out all the multiples of these numbers.

Circle all the remaining numbers, except one.

The encircled numbers are prime numbers.

1	2	3	4	5	6	7	8	9_	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Complete by writing the _____ between:

= 0		10
· 10	4727-1-4228449 pryss 44/2 y 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	20
3 20	0+4603x************************************	30
3 0	#	40
4 0	***************************************	50
50	\$2.000 (\$2000000000000000000000000000000000	60
e 60		70
70	drys-phothecholibito typesweerespitobuddeterindetereserespicotobusessanni-to-damens especificaturischicobusessanni-profit-	80
08	{*************************************	90
90		100

Complete each of the following

A prime number between	whose digit is greate	1:
than its Tens digit is	чн- ф	

An even number between	, some of its factors includes
the numbers 1, 2, 4, 8 is	

c	An odd number between	LAUI)	, some of its factors are:
	1. 3. 7 is		

A prime number that lies between	, and the digit in the
place is greater than the digit in	place is

A prime number that lies between	, and the digit in the
place is less than the digit in the	place is

All prime numbers are	numbers, except the number
is an even number.	

The smallest	prime	number	is		
--------------	-------	--------	----	--	--

	The prime numbers between 40 and 50 are	B
	The number that has only two factors is called the	**************************************
	The number of factors of the prime number is	And the control of th
	The integer one is not a prime number because it has	as
	Martin Control of the	only.
	The number 6 is not a prime number because it has	The state of the s
9	Choose the correct answer:	Providence (Control of Control of
Ĭ	a is a prime number.	(15 @ 17 @ 21)
	The smallest odd number is	(1 @ 2 @ 3)
	The smallest prime number is	(1 @ 2 @ 3)
	The smallest odd prime number is	(1 1 2 1 3)
	The smallest even prime number is	(1 💿 2 🗊 3)
	The prime number has only.	
	(one factor @ two factor	s of three factors)
	The number that has only two factors is called a	number.
	11	ne 🕶 even 🐨 odd)
	The integer one is not a prime number because it h	
	(two factors only @ one factor only @ more	
	The number 10 is not a prime number because it has	
	(two factors only one factor only one more	
	The number 5 is a prime number because it has	
	(two factors only one factor only one more	
	The number of factors of 14 is factors.	
	The number of factors of 16 is factors.	(4 @ 5 @ 6)
	A number whose factors are (1,2,4,5,10,20) is	
	The number 9 is a number. (prir	ne 🖤 eyen 🖤 odd)

1	Find	the	result	
	LIELLA	uiic	I GOUIL	

$$\bigcirc 9,028-4,409 =$$

Choose the correct answer:

All prime numbers are **odd numbers**, except is an even numbe .

45 million, 40 thousand, and 5 = _____ in Standard Form.

$$64X(6X3) = (4X6)X3.$$

(Commutative @ Associative @ Distributive)

A rectangle has a length of 5 cm and a width of 3 cm. Its area

is cm².

The number "0" is not a prime number because it has ______.

(only one factor @ only two factors @ more than two factors)

3 Complete the following:

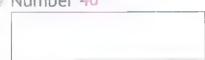
The smallest odd prime number is

The prime numbers between 60 and 70 are

The number of factors of 25 is

Find at the lactors of each number of the following:

Number 40





The factors of 40 are:

The factors of 28 are:

Exercises on Lesson 3

Greatest Common Factor (G.C.F.)

10,15	
•	
Factors of the number 10:	Factors of the number 15
ha common factors are:	
he common factors are:	C. F.) is:
	C(1) 15:
12,18	
Factors of the number 12:	Easters of the number 10.
ractors of the number 12;	Factors of the number 18:
he common factors are:	*
he common factors are:he greatest common factor (G.	
he common factors are:	*
he common factors are:he greatest common factor (G.	*
he common factors are:he greatest common factor (G.	*
he common factors are:he greatest common factor (G.	*
he common factors are:he greatest common factor (G.	*

The greatest common factor (G. C. F.) is: 24 , 36 Factors of the number : Factors of the number :		
The common factors are: The greatest common factor (G. C. F.) is: Factors of the number: Factors of the number The common factors are: The greatest common factor (G. C. F.) is: 24,36 Factors of the number: Factors of the number:		
The common factors are: The greatest common factor (G. C. F.) is: Factors of the number: Factors of the number The common factors are: The greatest common factor (G. C. F.) is: 24,36 Factors of the number: Factors of the number: Factors of the number:		
The greatest common factor (G. C. F.) is: Factors of the number: Factors of the number: The common factors are: The greatest common factor (G. C. F.) is: 24,36 Factors of the number: Factors of the number:	Factors of the number :	Factors of the number
The greatest common factor (G. C. F.) is: Factors of the number: Factors of the number The common factors are: The greatest common factor (G. C. F.) is: 24,36 Factors of the number: Factors of the number:	The common factors are:	
Factors of the number : Factors of the number The common factors are: The greatest common factor (G. C. F.) is: 24,36 Factors of the number : Factors of the number :		
Factors of the number : Factors of the number The common factors are: The greatest common factor (G. C. F.) is: 24,36 Factors of the number : Factors of the number :	_	
The common factors are: The greatest common factor (G. C. F.) is: 24,36 Factors of the number : Factors of the number :		
The common factors are: The greatest common factor (G. C. F.) is: 24,36 Factors of the number : Factors of the number :		
The common factors are: The greatest common factor (G. C. F.) is: 24,36 Factors of the number : Factors of the number :		
The common factors are: The greatest common factor (G. C. F.) is: 24,36 Factors of the number : Factors of the number :		
The greatest common factor (G. C. F.) is:	Factors of the number :	Factors of the number
The greatest common factor (G. C. F.) is: 24,36 Factors of the number : Factors of the number :		1944
Factors of the number : Factors of the number :		
Factors of the number : Factors of the number :	The greatest common factor (G. C.	. F.) is:
· · · · · · · · · · · · · · · · · · ·	24,36	
· · · · · · · · · · · · · · · · · · ·		
, and the same of		
· · · · · · · · · · · · · · · · · · ·		
, and the second of the final local and the second of the		
	Factors of the number :	Factors of the number :
	* ** *** **** **** **** ****	distances and distance = september = septe
	16 ()	\ :

9 48,32	
Factors of the number 48:	Factors of the number 32:
	F.) is:
(h) 60,36	
Factors of the number 60:	Factors of the number 36:
The common factors are: The greatest common factor (G. C	C. F.) is:
vided into equal groups of g	oys in a class. The pupils will be di- girls and equal groups of boys.
	of groups that can be formed so tha umber of pupils? How many boys
How many girls are in each	group of girls?

A teacher is preparing snacks to be distributed among the students.
If she has pieces of croissants and 16 pieces of sweets.
What is theseries of snacks the teacher can make if each
meal contains exactly the same number of croissants and exactly
the same of sweets? How many croissants are there in
each package? How many sweets are there in each package?

Mohab works in flower arrangements, he has 21 red flowers and blue flowers. If Mohab wanted all the arrangements to be and there were no flowers left, what is the greatest of flower arrangements could he have? How many red flowers and blue flowers are there in each arrangement?

Worksheet 🔃

1 Complete the following:	
The number that comes right after the nur	mber 25,999,999 is
The greatest common factor of 9 and 6 is .	INHESISII HArdan terrebandan dan dan d
© 90 x 500 =	
a (6 x 5) x 80 = =	AAAAAAAAAAAAAAAAAAA G
6 600,000,000 + 400,000 + 20,000 + 300 + 2	0 =
2 Choose the correct answer:	
(3 Ten-thousands, 4 Hundreds, 5 Ones) x 10	MANA MANA SOURCE
(30,	,405 💿 300,405 💿 304,050)
The greatest common factor of 8 and 12 is	(2 @ 4 @ 6)
Θ 9 x 500 = 45 x	(10 💿 100 💿 1,000)
A square has an area of 25 cm ² , its perimeter	r is cm.
	(25 💿 5 🕡 20)
© 5,000 meters = hectometers.	(5 @ 50 @ 500)
3 Find the greatest common factor of 30 ar	nd 45:
Factors of the number 30: Facto	ers of the number 45:
The common factors are:	
The greatest common factor (G. C. F.) is:	
4 Maryam practices swimming and spends	a third of an hour
swimming every day. What is the total nu	
spends swimming in 5 days?	
	Pro 1
EAST TARK MALE AL MOUNTAIN ON THE COMMISSION OF	

Understanding Multiples

On L. 4, 5&6

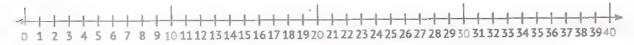
mUlyima Modulume of V

- Draw a connecting each number to the other to show . Start from each time:
- Find the multiples of 2.



Multiples of number are:

Find the multiples of 3.



Multiples of number 3 are:

Find the multiples of 4.



Multiples of number - are:

Find the multiples of 5.



Multiples of number 5 are:

			F	_	_,		-,				
2	Color the multiples using the	1	2	3	4	5	6	7	8	9	10
	following hundred table and Skip	11	12	13	14	15	16	17	18	19	20
	Counting:	21	22	23	24	25	26	27	28	29	30
	The multiples of 2 are:	31	32	33	34	35	36	37	38	39	40
	· · · · · · · · · · · · · · · · · · ·	41	42	43	44	45	46	47	48	49	50
	* * * * * * * * * * * * * * * * * * *	51	52	53	54	55	56	57	58	59	60
		61	62	63	64	65	66	67	68	69	70
	*** * * * * * * * * * * * * * * * * * *	71	72	73	74	75	76	77	78	79	80
		81	82	83	84	85	86	87	88	89	90
		91	92	93	94	95	96	97	98	99	100
	The multiples of 3 are:	1	2	3	4	5	6	7	8	9	10
	1-1- · · · · · · · · · · · · · · · · · ·	11	12	13	14	15	16	17	18	19	20
		21	22	23	24	25	26	27	28	29	30
	· · · · · · · · · · · · · · · · · · ·	31	32	33	34	35	36	37	38	39	40
	4 4 7 7 4 4 40 400 MARK	41	42	43	44	45	46	47	48	49	50
		51	52	53	54	55	56	57	58	59	60
		61	62	63	64	65	66	67	68	69	70
		71	72	73	74	75	76	77	78	79	80
		81	82	83	84	85	86	87	88	89	90
		91	92	93	94	95	96	97	98	99	100
	The multiples of 4 are:	1	2	3	4	5	6	7	8	9	10
		11	12	13	14	15	16	17	18	19	20
		21	22	23	24	25	26	27	28	29	30
		31	32	33	34	35	36	37	38	39	40
	*** 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	41	42	43	44	45	46	47	48	49	50
		51	52	53	54	55	56	57	58	59	60
		61	62	63	64	65	66	67	68	69	70
		71	72	73	74	75	76	77	78	79	80
		81	82	83	84	85	86	87	88	89	90
		01	02	οz	0.4	OΕ	00	07	00	200	100

The multiples of 5 are:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

The multiples of 6 are:

1	2	3	4	5	6	7	8	9	1.0
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

The multiples of , are:

1	-	2	3	4	5	6 1	1	8	9	10
1:	1	12	13	14	15	16	17	18	19	20
2:	1	22	23	24	25	26	27	28	29	30
3:	1	32	33	34	35	36	37	38	39	40
4	1	42	43	44	45	46	47	48	49	50
5	1	52	53	54	55	56	57	58	59	60
6	1	62	63	64	65	66	67	68	69	70
7	1	72	73	74	75	76	77	78	79	80
8	1	82	83	84	85	86	87	88	89	90
9	1	92	93	94	95	96	97	98	99	100
		-	_		-					

The multiples of 8 are:	1	2	3	4	5	6	7	8	9	10
# ************************************	11	12	13	14	-	16	17	-	+-	+-
	21	22	23	24	25	26	27	28	29	+
***************************************	31	32	33	34	35	36	37	38	39	+
***************************************	41	42	43	44	45	46	47	48	49	50
	51	52	53	54	55	56	57	58	59	60
	61	62	63	64	65	66	67	68	69	70
	71	72	73	74	75	76	77	78	79	80
	81	82	83	84	85	86	87	88	89	90
	91	92	93	94	95	96	97	98	99	100
The multiples of 9 are:	1	2	3	4	5	6	7	8	9	10
***************************************	11	12	13	14	15	16	17	18	19	20
***	21	22	23	24	25	26	27	28	29	30
1414 300000	31	32	33	34	35	36	37	38	39	40
	41	42	43	44	45	46	47	48	49	50
	51	52	53	54	55	56	57	58	59	60
	61	62	63	64	65	66	67	68	69	70
	71	72	73	74	75	76	77	78	79	80
	81	82	83	84	85	86	87	88	89	90
	91	92	93	94	95	96	97	98	99	100
Find the multiples of each of th	e ni	umt	ers	2 a	nd	3. u	n to	20	TI	non.
find the common multiples bet						-, -	P		. ,,	1011
- The multiples of 2 are:										
							hick dare as are as a p	P	Ma 11 14 14 14 14 14 14 14 14 14 14 14 14	
- The multiples of 3 are:								. dra 1. m s. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	l-Birkers ers ers eps g	11-11-10 B
- The common multiples of the tw	o nu	ımb	ers a	are:			l-d-t-riven maye.	ADINIPATA ANDRE		**********

4	Find the	of each of the numbers and 3, up to 40. Then					
	find the	between them:					
	- The multiples of	4 are:					
	- The multiples of are:						
		of the two numbers are:					
	er e e e e e						
	C-1I. 10						
1	Find the	of each of the numbers and , up to . Then					
	find the	between them:					
	 The multiples of 	7 are:					
	 The multiples of 	6 are:					
	- The common mu	tiples of the two numbers are:					
	Find the	of each of the numbers and it up to Them					
ė	Find the	of each of the numbers and ', up to Then					
į.	find the	between them:					
0	find the - The multiples of	4 are:					
ū	find the - The multiples of - The multiples of	between them: 4 are: 6 are:					
0	find the - The multiples of - The multiples of	4 are:					
0	find the - The multiples of - The multiples of	between them: 4 are: 6 are:					
7	find the - The multiples of - The multiples of	between them: 4 are: 5 are: tiples of the two numbers are:					
7	find the - The multiples of - The multiples of - The common mul	between them: 4 are: 6 are:					
7	find the - The multiples of - The multiples of - The common multiples of - The common multiples of	between them: 4 are: 6 are: tiples of the two numbers are: of each of the numbers 2 and 3, up to 2. Then between them:					
7	find the - The multiples of - The multiples of - The common multiples of - The common multiples of find the	between them: 4 are: 6 are: tiples of the two numbers are: of each of the numbers 2 and 3, up to 2. Then between them: 2 are:					
7	find the - The multiples of - The multiples of - The common multiples of Find the find the - The multiples of	between them: 4 are: 6 are: tiples of the two numbers are: of each of the numbers 2 and 3, up to 2. Then between them: 2 are:					

8	Find the multiples of each of the numbers 6 and 8, up to 60. Then
	find the common multiples between them:
	- The multiples of 6 are:
	- The multiples of 8 are:
	- The common multiples of the two numbers are:
	MARKET MA
9	Complete the following:
	(Write 5 multiples of 8:
	6 Write 5 multiples of 9 :
	© Write 5 multiples of 7: (,
	Write two common multiples of 2 and 6: (
	(Write two common multiples of 4 and 9:
	Write two common multiples of 8 and 5: ()
	① If $42 = 6 \times 7$, then is a multiple of the two numbers and
	. Also, and are factors of the number
	(is a multiple of the two numbers 5
	and 9. Also, and are factors of the number
	If $= 8 \times 3$, then is a multiple of the two numbers 8 and 3.
	Also, and are factors of the number
	① An even number is a multiple of 2,3,4 and lies between 20 and 30.
	The number is
	An even number is a multiple of 3,5,10 and lies between 20 and 40.
	The number is
	① An odd number is a multiple of 5 and 9 and lies between 30 and 50.
	The number is
	An odd number is a multiple of 3 and 7 and lies between 20 and 30.
	The number is

① Th	ne relationship between 2,4,8 is that	и при прави правитирова въселения вен в
Th	ne relationship between 2, 5, 10 is that	Min - Mark III (1991 - 1992) - Brigh - Million - Markad Street (1994) - Bright - Mark - Market - 1992
(2) TI	ne common multiples of 4 and 6 are:	
0	, 12 , 24 , 36 , 48 , , ,	
Choc	se the correct answer from the brackets:	
a	is a factor of 8.	(2 @ 16 @ 12)
6	is a multiple of 8.	(2 🚳 16 🚳 12)
¢	is a common multiple of 4 and	6. (12 🏐 16 🏨 18)
ø	is a common multiple of 8 and	3. (15 🍏 32 🍈 24)
@ f	4 X 5 = 20, then 20 is a for 4	and 5.
	(multiple	o factor o sum)
F 11	X = , then ; and ; are factors of the numbe	A CONTRACTOR OF THE PROPERTY O
		(7 on 21 on 3)
.n	is an even number that is a mu	Itiple of 2, 3, 4
а	and lies between 20 and 30.	(24 @ 26 @ 28)
13	is an even number that is a mu	ltiple of 2,4,5
á	and lies between 10 and 30.	(15 @ 20 @ 25)
W.	is an odd number that is a mul	tiple of 3 and 5,
	and it lies between 10 and 30.	(15 @ 20 @ 25)
10	is a multiple of all numbers.	(0 @ 1 @ 2)

Worksheet

1	Choose the correct answer:						
	Eight million, eighty (in Standard Form):						
	(8,000,080 @ 8,080,000 @ 8,800,000						
	The number 12 is a common multiple of 3 and (5 @ 4 @ 9						
	is the best unit for measuring the length of an ant.						
	(Millimeter @ Meter @ Kilometer						
	₫ 50 x = 20,000. (40 ₫ 400 ₫ 4,000)						
	⊕ 40 million x 100 =						
2	Complete the following:						
	The place value of the number 9 in the number 59,258,156 is						
	6 45,568 + 54,432 =						
	 G The number 45,985 rounded to the nearest 130 ≈ G A square whose perimeter is 20 cm, its side length = cm. 						
	A common multiple of the numbers 6,8 and it lies between the						
	numbers 20 and 30: ().						
3	Find the multiples of each of the numbers 4 and 6, up to 30. Then						
	find the common multiples between them:						
	- The multiples of 4 are:						
	- The multiples of 6 are:						
	- The common multiples of the two numbers are:						
1	Shaimaa went to the club at 8:45 am and came back at 10 am.						
•	How long did she spend in the club?						

Multiplying by 1-Digit and 2-Digit Factors

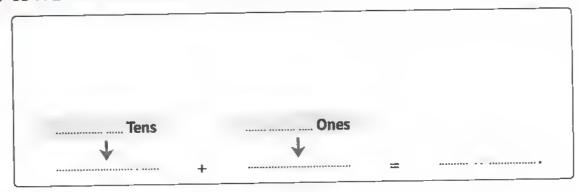
on the sun 1

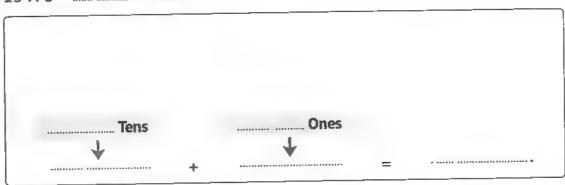
The Area Model Strategy

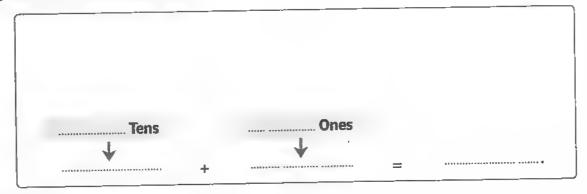
7

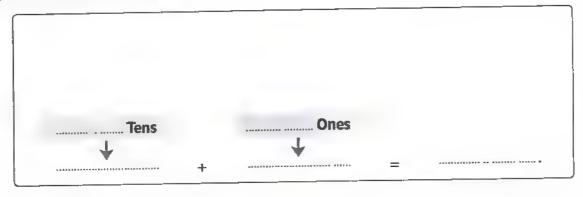
Wultiply using	a the	10.00	3 3 3 3	· B		
(a) 35 X 3 =			7 5 601 5 GC			
	Tens	,	Ones	=	VIII hid All Iddings do cophopor	
14 X 5 = .						
	Tens	+	Ones	×		
42 X 3 =						
	Tens	+	Ones	=	,	











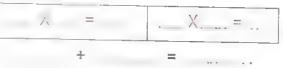
Use the mentingle Area Model Strategy to multiply:



+



ì	. "	Χ	. =
	+		





...



	(i) 99 X 9 =	X	***** 10000100100000

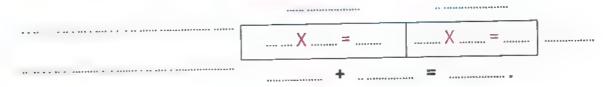
36 X 5 =	X =X	44577541444444	
		***************************************	_
	① 92 X 3 =	******** X ******** ******* ******** ******	
	The state of the s		_



 X =	X =
 ***************************************	***

The length of the bus route is 58 km. How many kilometers would the bus travel if it traveled this route 9 times a day?

(Use the Rectangle Area Model in your solution).



Hossam saves 85 pounds per month. How much does Hossam save in 6 months? (Use the Rectangle Area Model in your solution).

44541414	4 mp m m m de de de de 12 mg de 12 d
 X =	X =
 ***************************************	ALDESPECTITORNIALISE &

Worksheet

- Choose the correct answer:
 - The largest 7-even-digit-number is _____.

(9,876,534 @ 9,999,999 @ 9,999,998)

- $(1 \oplus 2 \oplus 3)$ The smallest odd prime number is
- If 5n = 50, then n = _____. $(10 \odot 0 \odot 5)$
- 90 X 60 = X 100. (86 @ 80 @ 48)
- 6+6+6+6+6=3X $(5 \odot 6 \odot 10)$
- Complete the following:
 - The greatest common factor of ... and ... is
 - 8 X = 40,000. **©** 9,000 – 2,458 =
 - 6 8,050,607 (in Expanded Notation):
 - To compare the numbers so and 9: (So equals the number 9). Multiply using the Fast Chinais Straid y:

....... Tens Ones Tens Ones _____ X = + Χ ... = , + =

ຼຸ່ວ ເພລເຄດ ອິດໝະອຽນ to multiply: Use the

(a) 08

Exercises on Lesson 2

The Distributive Property

Complete the following:

a
$$4 \times (8 + 9) = (4 \times ...) + (4 \times ...)$$

3
$$6 \times (3 + 4 + 5) = ($$
..... \times \times ... \times .

2 Use the Distributive Property to solve the following problems:

3	Use the Area Model of	a Rectangle to solv	e the following problems:
---	-----------------------	---------------------	---------------------------

a 8 X 125 =



.....



© 9 X 629 =

3 5 X 2,365 =	
	 + =
6 X 1,283 =	
)
9 X 1,822 =	
	:
7 X 2,005 =	
7 / 2,003	

4	The length of a bus is 1,280 centimeters.
	How long are 3 buses? (Use the Distributive Property)
41	
**	
E	Hisham bought 7 kg of oranges, the price of one kilogram was
5	525 piasters. How much did Hisham pay for the oranges?
	(Use the Distributive Property)
6	The distance from Ali's house to the school is 930 meters, and the distance from his house to the club is 5 times the distance between the house and the school. What is the distance between Ali's house and the club? (Use the Rectangle Area Model)
7	Strips of cardboard in the form of rectangles are 185 cm long and 8 cm wide .Find the area of this bar. (Use the Rectangle Area Model)
	N. M.

Worksheet

1	Choose	the	correct	answer:
	9110000	40.00	0011001	MILLIANT OF A

The equation that expresses "n is equal to three times 8n" is ______.

$$(n = 3 \times 8 \odot 3 \times n = 8 \odot 8 \times n = 24)$$

A square whose side length is cm, then its area is cm².

3 billion, 30 million, 300 -

(30 @ 24 @ 36) (in Standard Form)

(3,000,030,300 = 3,030,000,300 = 3,030,300,000)

(Commutative Associative Distributive)

Complete the following:

- is a common multiple of 4 and 5 and it lies between 30 and 40.
- ⑥ 60 X = 30,000.
 ∅ 45 grams = centigrams.
- . The number that represents Ten-millions in the number: 6,453,289,170
- 6:45 + 2:55 = ______

Use the Distributive Property to find:

Complete by using the following Area of Rectangle Model:

600 80 9 5.000

Exercises on Lessons 3.445

The Partial Products Algorithm, The Standard Multiplication Algorithm & Connecting Strategies

1 Complete the following:

$$\Theta$$
 9,000 + 500 + 30 + 2 =

Use the Partial Products Algorithm to multiply:

452

725

(4 X 700)

(4X4)

6	6	X	218	=	финтф тап миницепер и 5/40-4 40-45 ф ф а Іни В а и а а а а а а а а а а а а а а а а	
---	---	---	-----	---	--	--

218

X 6

(.....X)

* (.....X....)

·;- (..... X .,,...,)

@ 936 X 8 =

639

X 8

3 X 1,254 =

1,254

X 3

(1770/1000/000 X AMPANYONESS)

+ ····· (···· X ······)

6,152 X 9 =

6,152

X 9

+X)

③ 3 X 2,908 =

2,908

Х 3

.....X)

+X)

+X

(1) 6,028 X 6 =

6,028

X 6

(..... X ,.....)

+ (X)

+ · (X)

3 Use the Standard Multiplication Algorithm to multiply:

a

35

X 8

b

69

X 5 C

53

X 3

(1)

X

416

835 .

X 6

239

X 5

9 1,496

X 7

6 2,198

X 6

5,123

X 8

0

203

X - 6

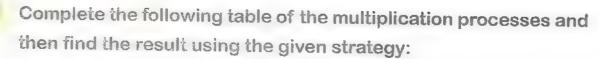
B

1,207

X 3

3,008

Χ



Problem	n	The Estimation of the Product	Solution Using a Strategy
(a) X	45 3	X	Base-10 Blocks Strategy
6 X	78 9	X	Rectangle Area Model
© 3	6	X	Distributive Property
3 ,4	8	X	Partial Products Algorithm
8,0 X	5	X	Standard Multiplication Algorithm

5	Complete	usina ((<	. =	or	>):
	0011101010			7		- // -

a 9 X 26	4 X 56	6 4 X 250	8 X 125
© 431 X 4	624 X 6	3 5 X 294	6 X 245
@ 25 X 80	205 X 8	f 30 X 300	3,012 X 3
9 752 X 2	7 X 525	(h) 365 X 8	600 X 50
1 8 X 2,500	40 X 500		

6 Ahmed's family bought 6 kilograms of meat. If the price of one kilogram is 135 pounds, how many pounds did the family pay?

7 An electrical appliance merehant bought 8 television sets, the price of each set is 6,250 pounds.

How much will the merchant pay for these television sets?

The day is 24 hours, how many hours are there in a week?

Worksheet

Choose the correct answer:

A billion is the smallest number consisting of _____ digits.

 $(7 \odot 9 \odot 10)$

∘ 5 X (400 + 3 + 70) = 5 X

(437 @ 473 @ 374)

€ 805 X = 3,220.

 $(4 \odot 6 \odot 7)$

o 5,000 + 20 + 3 =

(523 🍥 5,023 💿 5,000,203)

(a) If $8 + \chi = 3 \times 8$, then $\chi = \frac{1}{2}$

(3 @ 8 @ 16)

Complete the following:

is the greatest common factor of 12 and 18.

= 16,000.

Two weeks and three days = _____ days.

The place value of the digit 6 in the number 53,106,720 is

3 Complete using (< , = or >):

6 5 X 502

5 X 205

3 45 m

4,500 cm

1 20 X 50

8 X 125

456,258 + 543,742

The greatest 7-digit-number

5 Millions

5,000 Hundreds

Arrange the following numbers in a descending order:

45,500,000 , 54,005,000 , 45,000,050 , 54,000,500

The order:

A train has a cars. If the number of seats in one car is 64. How many seats will the train have?

Exercises on Lesson 6

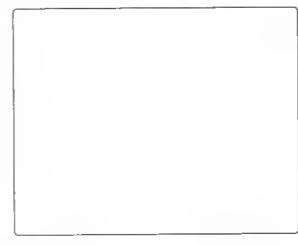
Two-Digit Multiplication

1 Find the product using the Rectangle Area Model:

to multiply:
35 X 60 =
3 40 X 17 =
68 X 50 =

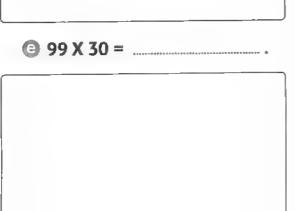
3 Use the Distributive Property to solve the following problems:

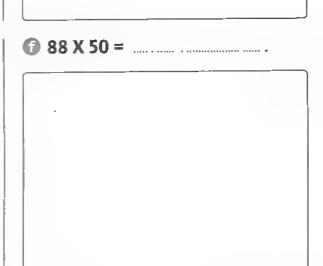
0	20	X	68	=	\$\$\text{\$\texittit{\$\text{\$\text{\$\text{\$\text{\$\text{\$\tex	



© 80 X 29 =

6 0 X 63 =	######################################
-------------------	--





4 Find the product:

Emad bought pens of the same type. If the price of one pen is plasters, what is the amount of money that Emad will pay?

A merchant has boxes of fruits. If each box contains kilograms, what is the mass of all boxes?

Souad bought meters of a piece cloth. If the price of one meter is pounds, what is the price of the whole piece of cloth?

Worksheet 🦲

1	Choose the	correct answer:		
a	A square has	a perimeter of 36 c	m, then its area is	cm².
				(9 🚳 12 🚳 81)
•		kg = 70,000 grams	5.	(7 or 70 or 700)
(30 X	= 3,600.		(12 💿 120 💿 1,200)
(The property	used in: 8 X (3 + 7)	$= (8 \times 3) + (8 \times 7)$	is
	Property.			iative 🗿 Distributive)
((8 Hundreds	and 6 Tens) x 100 =	quality (mathematic broads) and the state of	
	•			86,000 @ 8,006,000)
2	Complete th	e following:		
_	·	is a prime numbe	r that lies betweer	1 50 and 60 ,and its
		greater than its Ter		
0	-	of 21 are:		Description and the grant transmission of the property of the
		= 300,000		
		+ 8 = 5 X		
_		00) + (3 X 10,000) +		= AMERICAN PROPERTY AND
			,	
3	Find the res		(20,000, 35,00	07 _
•	3 45,268 + 15,	832 =	-	
	3 782 X 4 =	gan pana namenuwu u na	3 90 X 15 =	to to and a consequence to the total or the second or the
4	•	nt building has 20		
	18 apartme	nts, what is the to	tal number of ap	partments in the
	building?			
•	,/-14414144444444444444444444444444	4010101074474474474574707474444444444444	****** * ****** * ******* ****** * ***	2040 84 4 44 75 5 5 57020 55 8 8 8 8 405076554 4555 8

Emesson Lumin 788

் பார்க்க பார்கள் பார்கள்கள் & Algorimus and 2-Digit Muliplication

Use the learners area model to find the product:

= . .

ж.			

X	X
=	=
X	X
=	=

65 X 28

=+++

X

. X	X
=	=
X	X
******	- qohidardunga

@ 28 X 61

=____

2.0
ж

@ 69 X 37

= ----+

= .

X



=	(4114949)	+	+	404=04045-0×====	+	p-p-
=	pinnin = =babb					

X	**********	** * ******
an add 640	=	=
4	=	=

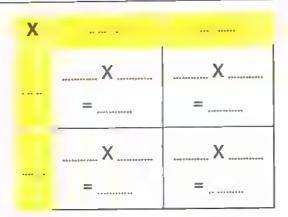
6 89 X 23

= ,.....

9 67 X 76

Х		
4	X	=
<u></u>	X	X

68 X 36



1

Use the Resident multiplication Algorithm to multiply:

65

X 28

(65 X 8)

+ (65 X 20)

39

X 93

.... (93 X 9)

+ (93 X 30)

◎ 75 X 31 =

75

X 31

· (___.X._..)

÷ (X....)

③ 36 X 13 =

36

X 13

.

.....X.......)

3 84 X 36 =

92

X 27

.___ (.. X ..)

84

X 36

2 Use the Partial Products Algorithm to multiply:

24

X	36)

72 X 46 =		

72

46 X

64

83

Х 39

98

75 X 52 =

75

***** ********** ..

Find the present of the multiplication of each of the following:

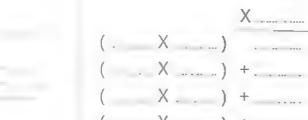
Begin by the product of the multiplication and then solve the problems using the vial Fronte Algorithm and the Standard Multiplication Algorithm.

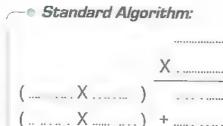
9 97 X 38 =

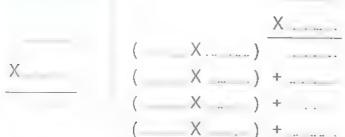
Estimation [,]	Partial Produ	ct Algorithm:	Standard Algo	rithm:
		X		X
	(X	.)	(X)	
Χ	(X	.) +	(X)	+
		.) +		
	(X	.) +		

1 85 X 14 =

—	Partial Product Algorithm:
	Χ







Partial Product Algorithm:

		X
(X)	**********
(X)	+

5	Ahmed bought 16 pens. If the price of one pen is 95 piasters,
	what is the price of all pens?

(Use the Area of a Rectangle Model to solve)

х		***************************************
4>>>>>>>	» X =	**************************************
· · · · · · · · · · · · · · · · · · ·		X =

ANALYSIA MARKATARIN NICOTAL X VALLEY ANALYSIA ANALYSIA SANAHAN
6 55 persons will travel together by bus, and the price of one ticket is 45 pounds. What is the price of the tickets for all passengers?

(Use the Area of a Rectangle Model to solve)

Х	***************************************	
V	X=	X=
*****************	X =	X =

7 If the price of a piece of chocolate is 12 pounds.
What is the price of 45 pieces of chocolate of the same kind?

....

(Parties of the Committee of the Comm

Worksheet

49	The Market B. S. Co.) E.	3 (2 (2) ()		
1 Choose the correct	answer:			
Three hundred and fr	fty million, th	ree hundred fifty	/:	
(in Standard Form).	(35	0,350 350,000	,350 - 350,35	50,000)
(5) 45 X 40	30 X 60.		(> @	= (1) <)
The largest number f	ormed from t	he digits	C	
55 appropriate of interpretation between the salar shared in		(986,310 @	103,689 @ 98	36,301)
(4 X 5) + (4 X 20) + (3	0 X 5) + (30 X	(20) =	**************************************	and description of the second
		(34 X 25 (42 X 35 @ 3	2 X 45)
= 500 Ten-thousands =		Millions.	(500 = 5	50 5)
Complete the follow	ving:			
is the	smallest odd	prime number		
The multiples of 6 to				
The place value of the				
The area of a rectang				
perimeter is				
9,000,000,000 + 5,000	0,000 + 6,000) + 2 =	A	
3 Complete the follow	ving:			
<i>a</i>) 68 b	45	6 40,000	① 45	,208
X 50	X 24	- 2,568	+ 35	
				11 7/2
**				
The day is hours.	How many	hours are ther	e in 👚 🛒	>

Exercises on Lesson 9

Putting It All Together

1	Aya draws paintings and sells them at art galleries. She charges 56 pounds for the large painting, and 24 pounds for the small
	painting. Last month, Aya sold six large paintings and three small paintings. How many pounds did Aya get for selling the paintings?
Ans	wer:
2	A fruit merchant sold 98 kilograms of bananas and 80 kilograms
2	of oranges. The price of one kilogram of bananas is 12 pounds,
	and the price of one kilogram of oranges is 10 pounds.
	How much pounds did the merchant get for selling the fruits?
Ans	wer:
3	Saleh drives for 2 hours and travels 240 km. Maher drives for 3 hours and
	travels 300 km. Adam also drives for 3 hours, but he travels 55 kilometers
	less than Maher. How many kilometers do they all drive?
Ans	swer:

	On Earth Day, workers planted 65 seedlings per hour. They
	worked for hours and then took a break. After the break, they
	worked for another : hours but only planted 55 seedlings per hour.
	How many seedlings did they plant in 5 hours?
	110 W Intally Seedings did they plant in 5 hours?
, Air	
	There are about car accidents per day in Egypt. The United
	States has about the number of car accidents per day.
	How many accidents are there per week in the United States?
	* *************************************
	***** * * * * * * * * * * * * * * * * *
	* * * * * * * * * * * * * * * * * * *
	Youssef reads pages every night for a week.
	Aya reads = page every night for a week.
	How many pages do they both read in a week?
	* * * * * * * * * * * * * * * * * * * *
	There are tickets available for sale for one of the shows.
	tickets were sold on Monday and 55 tickets on Tuesday.
	How many tickets are left for sale?
Ans	wer:
, 41 1.3	TO THE PROPERTY OF THE PROPERT
	* * * * * * * * * * * * * * * * * * * *

	Samah is planning a bike race. The length of one lap of the
	track is 126 kilometers. Competitors must do three laps around
	the track and then ride another 12 kilometers to the finish line.
, ,	What is the race distance that Samah must travel?
Ans	wer:
9	Jasmine bought 12 large sticker books. There were 96 stickers
	in each book. She gave 300 stickers to her friends.
	How many stickers does Jasmine have left?
Ans	wer:
	101111111111111111111111111111111111111
40	How many minutes are there in a day? And how many minutes
10	
10	How many minutes are there in a day? And how many minutes are there in a week?
	are there in a week?
	are there in a week?

Worksheet

1 Choos	e the	correct	answer:
---------	-------	---------	---------

is rounded to the nearest 10, the result is 5,600.

(5,655 @ 5,596 @ 5,608)

(a) 50 X 60 _____ 30 X 100.

(> 00 = 00 <)

ⓐ If 45 + a = 45, then $a = ____$

 $(0 \odot 1 \odot 2)$

③ 8 X 900 = X 100.

 $(8 \odot 9 \odot 72)$

A part the A part that its mass is approximately

(3 kg @ 3 gm @ 3 cm)

Complete the following:

A rectangle has a width of 5 cm, and its length is twice its width. Then its area is _____ cm².

The value of the digit 5 in the Billions place = _____times the value of the digit 5 in the Ten-thousands place.

The equation that represents "45 is 9 times the number a" is: ______.

① The G.C.F. for 48 and 36, is

(a) (7 X 6) + (7 X 80) + (7 X 300) = 7 X

3 Find the result:

Hazem bought 12 pens and 25 notebooks. If the price of one pen is 5 pounds and the price of one notebook is 7 pounds. How much did Hazem pay the seller for the pens and notebooks?

Concept 7.2 Dividing by 1-Digit Divisors

Exercises on Lessons 10&11

Exploring Remainders & Patterns and Place Value in Division

1 Complete the following table:

Problem	Dividend	Divisor	Quotient	Remainder
a 8 ÷ 4	· · · · · · · · · · · · · · · · · · ·			20011111 10 00 001
b 9 ÷ 2	\$\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			***************************************
© 15 ÷ 5	######################################			
d 28 ÷ 4	######################################			
9 36 ÷ 6	Harolooping Indo 2 do vala aras			**** *** ******** * *
f 35 ÷ 8	\$\phi \phi \phi \phi \phi \phi \phi \phi		ALAN 1 1117**** * A	****** * * ***** *** **
9 25 ÷ 4				107107
6 31 ÷ 5				1011000 - 410000
1 42 ÷ 8	\$14\$8888844555888888888			***** ******* * * * ****
1 48 ÷ 6	\$440-1440.000 NPV NPV NPV NPV NPV			******** * * ********

Complete the following table:

Equation	Related Fact	Related Fact
② 400 ÷ 4		
⑤ 8,000 ÷ 2		
③ 90,000 ÷ 3	\$	\$
③ 420 ÷ 7	l hida a ree a no polici di divina no mangod dod di hada hada a todo de di manuscopo dod di divina de di di divina de di di divina de divina de di d	
ⓐ 350 ÷ 5		
₱ 3600 ÷ 4		
② 27,000 ÷ 9		
(i) 240,000 ÷ 8	nodicontyphotocological becomes the contypy to the state of the contypy to the contypy t	
60,000 ÷ 3		
18,000 ÷ 6		

3 Find the quotient:

4 Complete using (< , = or >):

a 450 ÷ 5	350 ÷ 7	6 4,000 ÷ 5	2,000 ÷ 5
------------------	---------	--------------------	-----------

5 Complete the following:

a If
$$5 \times 8 = 40$$
, then $4,000 \div 5 = \dots$

b If
$$6 \times 7 = 42$$
, then $42,000 \div 6 = \dots$

© If
$$3 \times 4 = 12$$
, then $120 \div 3 = ...$

16 If
$$2 \times 9 = 18$$
, then $180,000 \div 9 = \dots$

(a) If
$$5 \times 4 = 20$$
, then $20,000 \div 4 = ...$

6 Saleem brought 15 pancakes to give to four of his friends.

How can Saleem divide the pancakes evenly?

7 A teacher has 21 candy bars and wants to distribute them equally among 5 students.

How many candy bars will each student get?

persons would like to attend a special event in Zamalek
District. There are several different ways to go to this event.
Participants can only choose one way to allow the whole group to go. Look at the means of transportation in the following table that they can use.

Means of Transportation	The Number of People Allowed in Each Means of Transportation	The Problem	Number of People Left
in Microbus	9		
1 Tuk Tuk	3		
Car	4		
Van	7		

Issam wants to put cups in boxes and ship them.

Each box holds 6 cups.

How many boxes are needed to ship the cups?

Ahmed distributed pounds again among his sees sons. What is the share of each son?

Emad spent within six days.

How many pounds did Emad spend in one day?

Worksheet

4	Choose	the	correct	answer
	CHICOSE	LITE	COLLEGE	allowel.

(3 of 30 of 300) and If 8 X 3 = 24, then $2,400 \div 8 = ...$

(> 0 = 0 <)

© $3,200 \div$ = 400. (8 **o** 80 **o** 800)

1 8 kg and 45 grams = _____ grams. (80,450 **1** 8,045 **1** 8,450)

② 5,000 Ten = _____ Thousands. (5 **③** 50 **③** 500)

2 Complete the following:

The perimeter of a square is 12 cm, then its area is _____ cm².

(in Expanded Form)

The factors of 28 are: ______, _____.

The remainder of 32 ÷ 6 is ______.

If 8 X 4 = 32, then 32,000 ÷ 8 = _______

3 Complete the following table:

Problem	Dividend	Divisor	Quotient	Remainder
a 45 ÷ 6	9019919146141111140411444444444444444444	\$1.14144.54541.58141.49494.545895141		
5 32 ÷ 8	, 4401 1-17-17-10-10-10-10-10-10-10-10-10-10-10-10-10-	* ************************************	**************	*** *** * * * * * * * * * * * * * * * *
© 14 ÷ 2	PIBPBAIAIAIRAIHAIAAARAAIBIIID	***************************************	.414111141141141141111411141141141	MITHER PROPERTY OF THE PROPERT
3 23 ÷ 5	2003-00-000-000-000-000-000-000-0	\$	\$ \$4.0 CHART BAL \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
6 68 ÷ 8	ம் 2 நிழ் வந்தி வக்கி மாழக்கி வடுக்க வந்கி வதிக்கிகள்கள் மாமக்கி brok.	ىدادى يېدىلى دادى دادى دادى دادى دادى دادى دادى	க் வ கல்ல் ச்சிக்க்கை வ கல்ல் வி. அக்கி வ அந்த அசாடு வ மு. ஆர் நடித்த நடைய மு. ஆர். இ. இ.	罗维奇 医中毒性抗性 化甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基

4 A school has 240 students divided into 8 classes equally.

How many students are there in each class?

* 7* 7 *** 7* ***** ** *** *** *** ***	
	-
	т
	**** * * * * * **********************

on

The Area Model and Division

Find the properties in each of the following:

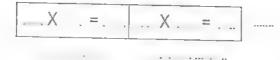
(Use the Area of Rectangle Model)

100	70	_	-
(3)	70	÷	5

+1	X	 r 6.	=		٠		****	X	 	=		
			_			_		_	_		_	 i

64 ÷ 4

X		_	i	V	_	
 7	9 46		** ** *	 \wedge	 -	*****



6 56 ÷ 3

 Χ	****	=			1400	X	***		-	=	******
			_	_		_	_	_	_		

* ** * ***** *

68 ÷ 5

9 587 ÷ 4
ⓑ 876 ÷ 6

① 615 ÷ 5
① 3,200 ÷ 4
• • • • • • • • • • • • • • • • • • • •
Ø 7/0 / 4

	mulaphication and bivision. Computation and reliacionship
Use the	to solve the following, show your steps
a An organization	donated . books to a school. The books will be
divided among	classes. How many books will each class take?
	pounds to buy a car. She was saving pounds orked. How many days did she have to work to save
enough money to	buy a car?
_	ook of stickers. The book contains 🦠 stickers. Amir
wanted to give t	he stickers to 4 of his friends.
How many sticke	ers will each of his friends get?

There are cars that need to use the stadium parking lot.

The stadium contains 4 parking lots.

Each parking lot must contain the number of cars

Worksheet 🕕

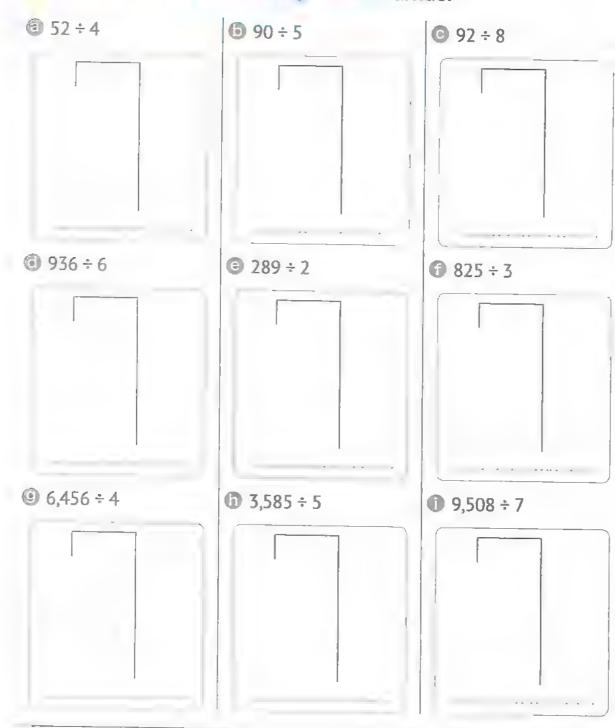
1 Choose the correct answer:	
The Additive Neutral Element is	(0 @ 1 @ 2)
The smallest odd prime number	is
© The largest even number formed	d from 7 different digits
is	(9,876,543 @ 9,999,998 @ 9,876,534)
6 4 liters and 15 milliliters =	milliliters.(4,150 @ 4,015 @ 40,015)
© 80 X == 1,600.	(2 @ 20 @ 200)
2 Complete the following:	
a The factors of 16 are:,	millionnumentary g restrictions continue g managementation g anticonstitutions a
The place value of the digit 6 in	the number 25 6 ,125,334 is
One week and two days =	days.
is a common multiple of	6 and 10 and it lies between 20 and 40.
9 million, twenty-five thousand, 1	three (in Standard Form):
3 Find the quotient and complet	te the Rectangle Area Model:
② 76 ÷ 4	b 144 ÷ 6
X = X = X =	******* X ****** = ******
***************************************	4-41-41-41

// / / / / / / / / / / / / / / / / / /	\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
76 ÷ 4 =	144 ÷ 6 =
4 Salma wants to divide 85 cand	dy bars between 5 of her friends
equally. How many candy bars	s will each friend get?

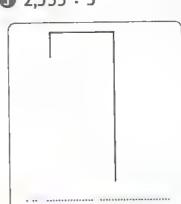
Emeson 13

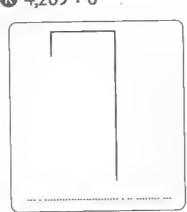
and the same algorithm

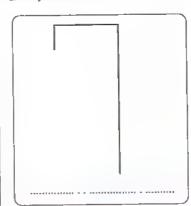
Use the was a united Algorithm to divide:











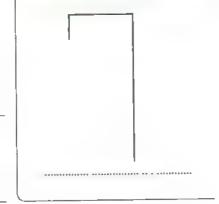
Write the division problem that matches each Rectangle Area Model. Then solve the problem using the Partial Quotient Algorithm:

a

- Nectangle Area Model:

4 X 20 = 80	4 X 3 = 12	4
20	3	

Partial Quotient Algorithm:



6

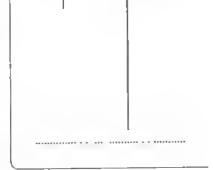
Rectangle Area Model:

Division Problem:

The remainder of the division is 2.

- Division Problem:

Partial Quotient Algorithm:

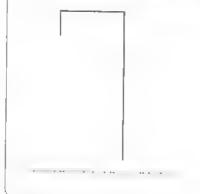




Rectangle Area Model:

Partial Quotient Algorithm:

- Division Problem:





Rectangle Area Model:

The remainder of the division is 3.

Division Problem:

Partial Quotient Algorithm:

*1 * *	**+		* *	



Rectangle Area Model:

- Division Problem:

Partial Quotient Algorithm:



3	A piece of land in the form of a rectangle has an area of
	96 square meters. If its width is 8 meters, find its length.
	(Use the Partial Quotient Algorithm)
4	Eman wants to distribute 1,548 among 6 persons equally.
-8	What is the share of each person?
	(Using the Partial Quotient Algorithm)
	(Coming and Coming and

_	A tourism company has prepared 5 buses to transport
5	
	175 tourists to visit the pyramids area.
	How many tourists will be in each bus? (Use the Partial Quotient Algorithm)
	(Use the Partial Quotient Algorithm)
	•

Worksheet

Choose the correct answer:

If the place value of the digit 5 is the Ten-thousands, then its value

(50 @ 50,000 @ 50,000,000)

(b) 2,400 ÷ 4 _____ 3,000 ÷ 6.

(> 0) = () <)

(a) If 5a = 45, then a = 1.

 $(45 \odot 9 \odot 40)$

The best unit for measuring the length of an insect is _

(meter @ centimeter @ millimeter)

3 8 X 500 = 4 X

(10 100 1,000)

Complete the following:

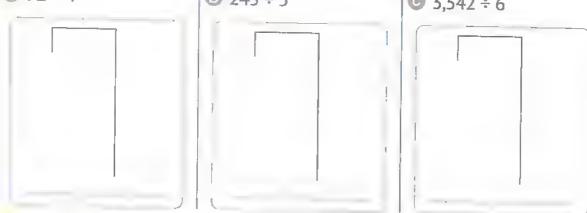
- The area of a square is 1.5 cm², then its **perimeter** is _____ cm.
- **(**) 45 + 99 = ____ + 100.
- The remainder of 93 ÷ 6 is ____
- (3 X 6) + (5 X 20) + (40 X 6) + (40 X 20) = 45 X

Use the Taranturorient Algorithm to divide:

(a) 72 ÷ 4

(b) 245 ÷ 5

3.542 ÷ 6



There are students on the playground and we need to divide them into teams. How many students will be in each team?

Exercises on Lessons 485

The Standard Division Algorithm & Division and Multiplication

Complete the following table:

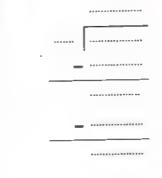
	Problem	The dividend is between	The quotient is between
a	64 ÷ 2	and	and
0	87 ÷ 3	and	and
0	124 ÷ 4	and	**************************************
0	105 ÷ 5	and	and
е	324 ÷ 3	and	and
Ø	864 ÷ 7	and	and
9	2,472 ÷ 6	and	and
0	3,648 ÷ 8	and	and
0	9,245 ÷ 5	and	and
•	7,206 ÷ 3	and and and	**************************************

Divide using the Standard Division Algorithm:

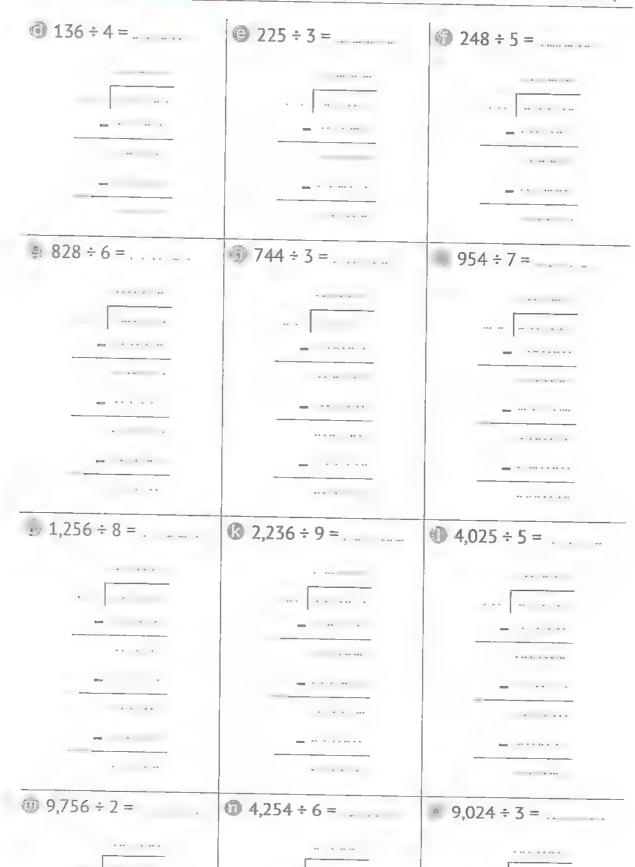
a 65 ÷ 5 =

_	*************

6 96 ÷ 6 = ____



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.,,,,	\$454× mahdhd 45454 ***
-	hiaisisiss ******
	44484171748444741
-	***********
	441



3 Complete the following table:

	Problem	The Quotient is between	Number of Digits of the Quotient	Using the Standard Division Algorithm
a	68 ÷ 4 =	and	· · · · · · · · · · · · · · · · · · ·	
6	135 ÷ 5 =	and	60	
0	868 ÷ 7 =	and	表示表示 化超过 化过程 中心中心 化水体管 医阴道 电电话 电电话 电电话 电影	
0	3,570 ÷ 5 =	and		
е	9,827 ÷ 3 =	and	· · · · · · · · · · · · · · · · · · ·	

A train has passenger seats. If the train has 7 cars and each car has the number of seats. How many passengers can be seated in each car?

(Solve the problem using at least two different strategies)

- 6 First Strategy:	Second Strategy:
How many books are i	in a library distributed over 3 cupboards there in each cupboard?
(Solve the prob	lem using at least two different sizes and
· First Strategy:	Second Strategy:
	and 216 girls. They are divided into
classes - How	many students are there in each class?

Worksheet !!!

Choose the correct answer:

The estimation of 49,286 using the strategy Front-end Strategy,

(50,000 or 49,000 or 40,000)

b 45 ÷ 3 _____ 56 ÷ 4. $(> \bigcirc \bigcirc \bigcirc = \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$

The value of the digit 5 in the Ten-thousands place = (10 100 1,000) times the value of the digit 5 in the Tens place.

(110 @ 245 @ 355) **6** 245 + 110 = ____ + 245.

(500 @ 50 @ 5) **a** 45,000 ÷ = 9,000.

Complete the following:

200 minutes = 3 hours and ____ minutes.

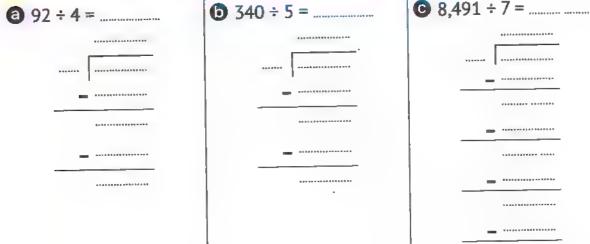
6 9 X 300 = ____ X 100. **6** 9,456 - 2,367 = ____.

The prime number that comes after 19 is _____.

(45 X 5) + (45 X 60) = 45 X

Divide using the Standard Division Algorithm:

6 340 ÷ 5 =



A hotel consists of 215 rooms distributed equally among 5 floors. How many rooms are there on each floor?

Amira bought of pencils. In each box, there are 28 pencils. She also had of pencils in her house. In each box, there are . Amira wanted to bring all the pencils to school and give them to of her friends. How many pencils will each friend have?

What nappens in the problem?

What are the in the problem?

can be asked in this problem?

3.1539/01.1

Reem wants to read a war and a The first week, she read . The second week, she read 195 pages. How many pages are remaining for her to read?

What happens in the problem?

What are the in the problem?

What can be asked in this problem?

auswer: ...

pages to the least number of pages.
Jasmine's longest book has 1,400 pages. Her shortest book has
376 fewer pages than the longest.
If the book in the middle of her shelf has three times the number
of pages of the shortest book, then how many pages does the
book in the middle have?
What happens in the problem?
What are the values in the problem?
What questions can be asked in this problem?
Answer:
4 Ahmed serves ice cream at a local ice cream shop.
He sold 19 ice cream cones on Saturday, 27 ice cream cones on
Sunday, and 153 ice cream cones on the remaining days.
How many ice cream cones did Ahmed sell on the weekdays?
What happens in the problem?
What are the values in the problem?
What questions can be asked in this problem?
Answer:

There are 1,421 tourists that visit the pyramids every weekend. How many tourists visit the pyramids in 8 weekends?
What happens in the problem?
What are the values in the problem?
What questions can be asked in this problem?
Answer:

3 Jasmine wants to organize her books from greatest number of

A teacher bought of crayons. Seven of the packs had in them. The other had to crayons in each.

How many crayons did the teacher buy in all?



Four families went to the zoo. Each family has 2 adults and 2 children. Each child's ticket costs 14 LE and each adult's ticket costs 22 LE.

How much will the zoo tickets cost in total?

What happens in the problem?
What are the values in the problem?
What questions can be asked in this problem?
Answer:
Sarah received 352 LE for her birthday. She found some toys
that costed 8 LE each. How many toys could she buy?
What happens in the problem?
What are the values in the problem?
What questions can be asked in this problem?
Wilde questions can be asized in this production
Answer:
Answer:
Answer:
Answer: There are 164 persons who play wind instruments and 20 persons
There are 164 persons who play wind instruments and 20 persons who play percussion in a band. If the band instructor puts
There are 164 persons who play wind instruments and 20 persons who play percussion in a band. If the band instructor puts 8 students in each row. How many rows will there be?
There are 164 persons who play wind instruments and 20 persons who play percussion in a band. If the band instructor puts 8 students in each row. How many rows will there be? What happens in the problem?
There are 164 persons who play wind instruments and 20 persons who play percussion in a band. If the band instructor puts 8 students in each row. How many rows will there be? What happens in the problem? What are the values in the problem?

Worksheet

1	Choose the correct answer:	
	The number rounded to the nearest 1,000 ≈	
	(20,000 @ 24,000 @ 25,00	00)
	⑤ 50 X 600 300 X 100. (> ⊙ = ⊙	<)
	Three billion, thirty thousand, three hundred (in Standard Form):	
	(3,030,300 - 3,000,030,300 - 3,030,000,30)0)
	The smallest two-digit prime number is . (11 ** 10 **)	3)
	⊕ 360 ÷	10)
2	Complete the following:	
	Two weeks and three days = days.	
	The number that comes right after 25,999 is	
	√ 75,269 + 24,731 =	
	if $270 \div 6 = 45$, then the divisor is and the dividend	
	is .	
	€ 26 X 53 = (X 3) + (X 50).	
	Find the result of each of the following:	
	45,263 + 15,337 =90,250 - 24,036 =	
	29 X 32 =	
	Arrange the following numbers in a hearending order:	
	352,025 , 523,205 , 253,520 , 352,250	
	The order:, , , , , , , , , , , , , , , , , ,	
	A school has , and the number of girls is of times the	
	number of boys. The students are divided into Colasses.	
	How many students are there in each class?	

Unit 8 Order of Operations

Concept 8.1 Order of Operations

Exercises on Lessons 1-4

Problem-solving Strategies, Which Comes First?,
Order of Operations & The Order of Operations and Story Problems

	m 44 - 1	-	- 4.1	4 lu	- 46	fallandan.	nuchlama.
7	Follow the order	OT O	perations	TO SOLA	e uie	TOHOWING	hioniems.

a	15 + 5 + 7	6	9+11+16	0	9 – 6 – 3
	=		=		=
	=		=		=
0	12 - 2 - 5	e	8 + 7 - 10		9 + 8 - 7
	=		=		=
	=		=		=
9	7+9-6	0	24 - 5 + 3	•	15 - 7 + 2
	=		=		=
	=		=		=
•	21 - 9 + 11	R	5 X 2 X 9	0	8 X 5 X 6
	=				=
	=		=		=

(i) 45 ÷ 5 ÷ 3		⑤ 5 X 8 ÷ 4
=	=	=
	=	=
- 6 X 6 ÷ 9	◎ 5 X 2 ÷ 5	€ 48 ÷ 8 X 5
=	=	=
=	=	= .
§ 72÷9 X 6	32 ÷ 4 X 5	
With the second	=	
-	=	

Follow the properations to solve the following problems:

9 8 X 5 + 7	① 9X4+14	₩ 4 X 8 - 5
=		= .
=	=	=
€ 4 X 8 - 9	(a) 7+2X9	6+3X2
Æ	=	= .
=	=	=
3 12 - 3 X 3		7 + 8 ÷ 2
	=	= .
_	=	=

•	6 + 18 ÷ 3	ß	48 ÷ 8 + 5	0	63 ÷ 7 + 21
	=		-		=
	=		=		=
0	36 ÷ 9 – 3	0	42 ÷ 7 – 5	0	12 - 10 ÷ 2
	= ,		=		=
	_				

0	15 - 14 ÷ 7
	=
	=

Follow the order of operations to solve the following problems:

8 + 5 + 7 + 3
 =
 =
 25 - 8 - 3 - 6
 =
 =
 48 ÷ 2 ÷ 4 ÷ 3
 =

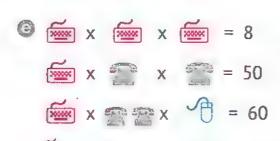
Solve the following puzzles. When you know the number each picture represents, write the value above the picture. Remember the

$$+$$
 $+$ $=$ 24

 x x $=$ 72

 x $+$ $=$ 29

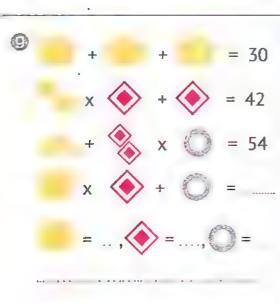
 x $+$ $=$... $=$... $=$... $=$



0	>	+	+	+	+	= 30	
	*	+	0	+	8	= 32	
						= 40	
		+	8	+	+	·=	

→ =, = =

.....



6	14 + 14 t	+ 1/2	= 36
	+ 🔥	x 🏡	= 26
	□ ×	+	= 35
	ㅁㅁ+ ☆	X	=
	↑ =,	=,	1 =

5 Follow the order of operations to solve the following problems:

7 X 3 + 5 X 6

@ 6X3+2X5

@ 9X7-4X6

3 4X8-3X7

12 ÷ 4 + 15 ÷ 3

 $18 \div 6 + 24 \div 8$

 $\frac{36 \div 9 - 24 \div 8}{}$

 $45 \div 5 - 42 \div 7$

Follow the order of operations to solve the following problems:

3 6X8+2X5+4X7

3X9-4X2-5X2

 $48 \div 2 + 35 \div 7 - 64 \div 8$

(a) 5 + 4 X 3 - 7	•	40 – 4 + 2 X 8
=		=
=		=
= ,,,		=
9 3 X 5 + 4 X 3 – 9	6	8 + 35 ÷ 5 – 3 X 4
=		
=		=

Use numbers and symbols to represent what happens in each problem and then solve it (remember the order of operations):

There are 194 persons in a concert. After the party, 50 persons left in cars. The rest of them want to go home by microbus. If each microbus has seats for 9 persons, how many microbuses are needed for everyone to get home?

Bilal bought 6 bags of balloons. Each bag contains 18 balloons. He wants to give balloons to his friends at his birthday party. If he has 8 friends at the party, how many balloons will each friend take?

Unit 1

Lesson

Digit, Numeral, Number

V				
		Digit	Number	numeral
a	369		1	1
0	24		1	1
Θ	9	1	1	1
()	Forty six			1
(2,000		1	1
0	6,330,265		1	1
9	Eight			/
0	7	1	1	1
•	88		1	1
0	0	1	1	1
0	Three hundred seventeen			1
0	Ninety			1

- 2 97,540 , 40,579
- (3) (a) Ten-thousands. (b) Hundred-thousands.
 - Tens.
- Hundreds.
- Ones.
- (4) (3) >

- **(i)** =

Lesson

Really Big Numbers!

- 3 27 Millions, 254 Thousands, 985. Twenty seven million, two hundred fifty four thousand, nine hundred eighty five.
 - 1 Milliard (Billion), 390 Millions, 402 Thousands, 650.

One Milliard (Billion), three hundred ninety million,

four hundred two thousand, six hundred fifty.

- **2 3** 45,120,123
- **(b)** 259,024,000
- © 275,000,229
- **6** 9,109,056,002
- **3,000,215,028**
- 3 6 9 .445 .325
- 925.23.7
- © 24,0,305
- 6, 25, 7, 0
- 98,29,0,28

- a Hundred-thousands.
 - Tens.
- Milliards (Billions).
- Ones.
- Millions.
- Hundred-millions.
- **6 a** 2,5**8**7,924,388
- **1 25,348,975**
- **962,525,252**
- **6 a** 345,82**3**,622
- **(b)** 9,909,909
- © 253,332

Lesson



Changing Values

- 1 4 Ones.
- (b) 2,000, Thousands.
- © 7,000,000 , Millions.
- 6 500 Hundreds. 0 Hundred-thousands.
- 1 9,000,000,000 Billions.
- **2 3** 300
- 000,000,000
- 500
- 600,000
- 500
- 68 🚹

Lesson

Comparing Values

- **1 a** 500
- 6,000
- **9** 8
- **10.000**
- hundred-thousands.
- 1 hundreds.
- 100
- **100**
- 2 a 43 X 10 = 430 b 230 X 100 = 23,000
 - **1,000** × 5,600 = 5,600,000
 - **3** 90,805 X 10 = 908,050
 - 900 X 1,000 = 900,000
 - **()** 24,000 X 100 = 2,400,000
 - 9 25,000,000 X 10 = 250,000,000
- 3 10,000,000
- 7
- **9**,999,999,999
- **1** 9,876,543
- **6** 50,600
- 98,743,210
- 9 30,456,789
- 9.999.998
- 000.000
- ten-thousands.

Many Ways to Write

- Seventeen million, two hundred thousand, five hundred twenty three.
 - One hundred million, twenty thousand, forty five.
 - © 20,100,459: Twenty million, one hundred thousand, four hundred fifty nine
 - 7,000,050,200: Seven milliard (billion), fifty thousand, two hundred.
- 2 6 5,025,203
- 0 3,006,004,004
- 9,040,080,206
 7,000,500,200
- (3) (a) 40,000,000 + 300,000 + 100 + 2
 - 7,000,000,000 + 80,000+ 6
 - © 7,000,000,000 + 50,000 + 200
 - 100,000,000 + 50,000,000 + 20,000 + 9,000 + 300 + 10 + 6
- Two hundred three million, five hundred thousand, two hundred. 200,000,000 + 3,000,000 + 500,000 + 200
 - 5,004,019,675, 5,000,000,000 + 4,000,000 + 10,000 + 9,000 +600 + 70 + 5
 - © 120,090,308 One hundred twenty million, ninety thousand, three hundred eight.

Lesson 6

Composing and Decomposing

- 6 8,027,050,006. (8 X 1,000,000,000) + (2 X 10,000,000) + $(7 \times 1,000,000) + (5 \times 10,000) + (6 \times 1).$
 - 6,000,920,590 6 Milliards (Billions), 0 Millions, 920 Thousands, 590.
 - (2 X 10,000,000) + (1 X 10,000) + (4 X 1,000) + (2 X 10) + (3 X 1). 20 Millions, 14 Thousands, 23.
- 2 6 80.070.021
- 2.000.098,500
- 900.250.209

- 3 60,000,000+ 7,000,000 +100,000 + 20,000 +5.000 + 10 + 2.
 - **(b)** 7,000,000 + 20,000 + 4,000 + 600 +50.
 - **9** 70,000,000+ 5,000,000 + 30,000 + 400 + 60.
- (1) (a) (6 X 1,000,000,000) + (9 X 100,000,000). + (1 X 10,000) + (4 X 1).
 - (8 X 1,000,000) + (7 X 10,000) + (2 X 100)
 - (1 X 10,000,000) + (2 X 100,000) + (5 X 100) + (4 X 10) + (8 X 1).
 - (2 X 1,000,000) + (2 X 100,000) + (5 X 10) + (7 X 1)

Lesson

Comparing Really Big Numbers

- 6
- - **(** <
- **(1)** >
- (a) =
- (Many answers can be written).
 - @ 600,000
- 300
- 6,000,000
- 30,000
- (Many answers can be written).
 - 200,000 a 300,000
 - **(b)** 300,000 a 100,000
 - **©** 72,000,000
- **1**7,500,000,000
- 6 100,000,000 c 200,000,000

Lesson 8

Comparing Numbers in Multiple Forms

- **1 3** =
- **(**) >
- **G** <
- ₫ < □</p>
- (Many answers can be written)
 - 000,000,8 📵
- 10,000,000
- (Many answers can be written).
 - 100,000,000 + 500,000
 - **(b)** 10,000,000 + 500,000
- (Many answers can be written).
 - (3 X 10,000)
- (6 X 1,000,000)
- (Many answers can be written)
 - Four hundred thousand
 - One million.

Descending and Ascending Numbers

- 1 a 520,000 · 502,000 · 250,000 · 205,000
 - **6** 643,205 · 436,250 · 364,250 · 346,205
- 2 3 100,000 · 900,900 · 999,999 · 9,000,000
 - **6** 78,090 , 78,091 , 78,999 , 79,010 , 79,100
- 3 (3) 3,010,002,050
- **(0)** (4) 3,100,020,005
- © (2) 3,001,200,500
- **d** (5) 3,100,200,100
- (1) 3,001,002,005
- 4,000,060,007
- **(**2) 4,000,600,070
- (1) 4,000,600,700
- **d** (4) 4,000,006,700
- (5) 4,000,006,070

Lesson 10

Predicting the Unpredictable

- 40,000,000
- 000,000,000
- **©** 7,000,000,000
- 3,000,000
- 6 10,000,000

Lesson

Rounding Rules

First: The midpoint strategy:

- 1 a Midpoint: 235
- → 238 ≈ 240.
- hidpoint: 95
- → 98 ≈ 100.
- 2 a Midpoint: 250

- \rightarrow 278 \approx 300.
- → 7,429 ≈ 7,400
- (3) (a) Midpoint: 4.500
- → 4.500 ≈ 5.000.

Midpoint: 7,450

- **b** Midpoint: 11,500 → 11,157 ≈ 11,000.
- \bigcirc 6 Midpoint: 9,500,000 → 9,208,504 ≈ 9,000,000.

 - Midpoint: 22,500,000
 - $22,699,205 \approx 23,000,000.$

Second: The place-value strategy:

- **1 a** 260
- 370
- **©** 70
- 100
- 12,260
- 124,000
- 2 6 800
- 6,900

- 71,900
- **1.000**
- 30.000
- 1,500
- (3) (a) 16,000
- 000.00
- 000,000,1
- 453,000,000

- 669,460,000
- 0,000,000,7
- - $10 + 60 = 70 (\checkmark)$
 - 415, 100 + 200 = 300 (x),
 - 200 + 200 = 400 ()
 - \bigcirc 572,200 + 200 = 400 (X),
 - 300 + 300 = 600 (**√**)
 - \bigcirc 5,911,3,000 + 2,000 = 5,000 (x),
 - $3,000 + 3,000 = 6,000 (\checkmark)$

Unit 2

Lesson

Properties of Addition and Subtraction

- Commutative.
 - Neutral Element.
 - Associative.
- Commutative.
- Neutral Element.
- Associative.
- 2 a 3 . Commutative.
 - 17 .Commutative
 - 5 . Neutral Element.
 - 0 , Neutral Element.
- 48 . 48 . Associative.
 - 214, 214, Neutral Element.
 - 86,86,Associative.
 - 35, 35, Associative and Neutral Element.

Lesson

Mental Math Strategies

- **1** (08, 06 **(a)**
- 10,20
- 230,240
- **300**,300
- **9** 4,000 , 3,000
- **2 a** 54
- 101

- 644
- **1** 29
- 43
- **148**
- **3 a** 190
- 562
- G 51
- **302**
- **(1)** (2) 8
- **1**0
- 95
- 6 (a) Compensation , 113.
 - (b) Compensation , 26.
 - Counting Up , 7.
 - Composing and Decomposing, 329.
 - Composing and Decomposing, 609.
 - Compensation 199

Lesson (8

Addition with Regrouping

- **10** (2) 89,900
- **(**) 9,030,290
- 000,000,000
- **11,110**
- 9 1,000,005
- 1,010,511,000
- 2 (a) 14,102 , 14,100 (√) , 14,100 (√) , 14,000 (✗). (b) 9,872 , 9,870 (√) , 9,900 (x) , 10,000 (x).
- Estimation: 140 + 170 = 310. Actual Answer: 142 + 165 = 307
- Estimation: 400 + 500 = 900 Actual Answer: 383 + 462 = 845.
- Estimation: 2.000 + 2.000 = 4.000 Actual Answer: 2,420 + 2,420 = 4,840.

Lesson

Subtraction Strategies

- **191**
- 3,845
- **©** 2,999
- **(1)** 8,950
- **2 a** 262
- 4,063
- 2,899
- 6 8,202

Lesson

Subtraction with Regrouping

- **1,431**
- 13,187

- 2 a 2,142 , 2,000 b 28,422 , 30,000
- 3 15,422,140 6,350,300 = 9,071,840 15,000,000 - 6,000,000 = 9,000,000
- 4 255,000 6,200 = 248,800
- **a** 3,548 1,672 = 1,876 **b** 3,452 1,267 = 2,185

Lesson 6

Bar Models, Variables and Story Problems

1 a Equation: x = 8,500 - 6,250

Solution	n: x	= 2	.250

8,500			
x 6,250			

b Equation: x = 2,050 - 985Solution: x = 1.065

2.050 985

© Equation: v = 4,200 - 3,350Solution: y = 850

4.200 у 3,350

a Equation: a = 90,950 + 750,500

Solution: a = 841,450

a			
90,950	750,500		

2 a Solution: x = 7,120 - 5,200

x = 1.920

7.120 x 5,200

b Solution: y = 22,120 + 18,850

y = 40,970

-	
,	у
22,120	18,850

Solution: a = 6,000 − 812

a = 5,188

6,000 812 a

3 Solution: w = 7.600 - 4.455

W = 3,145

7.600 W 4,455

Lesson

Solving Multistep Story Problems with Addition and Subtraction

- 1,075 + 1,120 + 1,325 = 3,5206,853 - 3,520 = 3,333
- **2** 59,000 + 27,525 + 32,975 = 119,500
- 150,000 119,500 = 30,500 320,000 + 200,000 = 520,000
- 520,000 420,195 = 99,805

Unit 3

Lesson

Ant Travel

- (1) (a) centimeter.
- b kilometer.
- @ millimeter.
- d kilometer.
- meter
- 2 a 5,000 b 2 c 9 6 900 50 20,000 30 70 35 40,000 600
- 3 a 840 cm.
- **5.020** cm.
- **©** 7,070 m.
- **15,120 m**
- (a) 3 m , 72 cm,
- 10 m , 5 cm.
- 9 km, 300 m.
- 10 70 km , 20 m.
- 1 625 cm.
- **5** 9,032 cm
- **4.138 m.**
- **14,225 m**.
- (a) 4 m . 25 cm.
- 10 20 m . 3 cm.
- 9 7 km , 529 m.
- 10 900 m, 50 cm.
- **5** 100,000 cm = 1,000 m = 1 km.
- 6 15 dm = 1,500 mm.
- $70500 \div 50 = 10 \text{ minutes.}$ $50 \times 30 = 1,500 \text{ m.}$

Lesson 2

The Weight Can Wait

- (1) (a) kilogram,
- gram.
- gram,
- d kilogram.
- 2 a Gram Kilogram b Gram Kilogram 2,000 2 9,000 9 15,000 15 5,000 5 61,000 61 12,000 12
- 3 9,105 grams.
- 32,008 grams.
- 😉 8 kg , 235 gm.
- **6** 41 kg, 623 gm.
- **1 a** 6,000 gm.
- **5** 200,000 gm.
- 90 kg.
- 3 200 kg.
- @ 3 kg 624 gm.
- 67 kg 26 gm.
- 9 5,583 gm.
- 50,009 gm.

- **5** 45,200 gram.
- 5 kg = 5,000 gm , 7 kg = 7,000 gm. The sum = 5,000 + 500 + 7,000 = 12,500 qm.

Lesson 3

Fill It Up

- ① ② 50,000 D 200
 - 520,000,000 18,000
- 2 a 35,020 mm.
- 5 9,252 milliliter.

000.8

7

- © 3 liter 22 milliliter.
- 300 liter 200 milliliter.
- 3 3,000 milliliter. 50,000 milliliter.
 - @ 700 liter.
- 15 liter.
- 7 liter 320 milliliter.
- 1 20 liter 8 milliliter.
- 9 11,011 milliliter.
- 10.002 milliliter.
- 45 liter = 45,000 milliliter.

30 liter, 250 milliliter = 30,250 milliliter.

Amount of gasoline = 30,250 - 45,000

= 14,750 milliliter

5 2,500 milliliter . 1,250 milliliter.

Amount of juice = 2,500 + 1,250

= 3,750 milliliter.

3 2 liter = 2,000 milliliter.

The amount of soda water = 2,000 - (320 + 250)

= 2.000 - 570

= 1,430 milliliter.

Lesson 4

Measurement and Unit Conversions

- 1 3 X 100 = 300 cm.
 - 120 ÷ 10 = 12 dekameters.
 - © 50 X 10 = 500 centigrams.
 - \bigcirc 1,200 ÷ 10 = 120 grams.
 - ② 2,000 100 = 20 deciliters.
 - 1 42 X 100 = 4,200 liters.

- 200,20
- 400,40
- **©** 250, 2500
- 700,70
- 120 , 1,200
- **1** 500 , 50
- 3 400 m = 40,000 cm,
- 4.000 milliliters = 4 liters.

What time is it?

- Answer by yourself.
- 2 (a) 7, 21, 35, 49, 63
 - 24,96,144,192,240
 - © 60,120,300,480,600
 - 60,180,360,420,540
- 3 16
- 178
- 87
- **130**
- **(335)**
- 650
- 305
- **(1)** (2) (4)
- 6,3
- **Q** 2,2
- **3** 5,10
- **2,30**
- **6** 5,30

- **9** 1,30
- 10,5
- 6 3 + 4 = 7 days.
 - 7 days = 168 hours.
- 6 3 + 2 + 4 = 9 hours.
- 9 hours = 540 minutes

Lesson

How long does it take?

- 4 00
- 8:10
- 6:42
- 4:33
- 9:50
- 6:27
- 28:45+1:25=9:70
 - = 10:10
- 3:30 + 2:45 = 5:75
 - = 6:15
- 4 1:22 + 2:12 + 1:57 = 4:91
 - = 5 : 31

Lesson 7

Scaled Measurement

- $9 \times 5 = 45$
- $3 \times 8 = 24$
- $5 \times 9 = 45$
- $8 \times 3 = 24$
- 45:5=9
- $24 \div 3 = 8$
- 45:9=5
- 24:8=3
- 2 a 15
- 60 minutes.
- 150 minutes.
- 135 minutes.
- 105 minutes.
- 8 students.
- 9 18 students.

Lessons

Measuring the World Around Me

- Weight of potatoes and onions:
 - 2,950 1,075 = 1,875 gm.
 - 2,950 + 1,875 = 4,825 gm.
- 12 veeks = 84 days.

The difference = 84 - 45 = 39 days.

- 3 20.000 ml = 20 L
 - 100 20 = 80 L
- **1** 8,000 + 1,000 + 500 + 225 + 275 = 19,000 gm = 19 kg
- 12 ÷ 3 = 4 m = 400 cm.
- 4 X 500 = 2,000 ml
 - = 2 L
 - 2 X 7 = 14 L
- 7 5 X 500 = 2,500 gm.

100,000 + 2,500 = 102,500 gm.

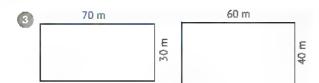
Unit 4

Lesson



Marching Ants

- 1 26 cm.
- 78 cm.
- 100 cm.
- 2 140 cm.
- **5** 32 m.
- 6 m.





Lesson 2

Fill the Space

- 1 a 40 cm². b 250 cm². c 400 cm².
- $28 \times 6 = 48 \text{ m}^2$.
- 3 9 X 9 = 81 cm².
- Area = 12 X 2 = 24 m². P = (12 + 2) X 2 = 28m
- P = (8 + 3) X 2 = 22 cm.



P = (6 + 4) X 2 = 20 cm.



6 P = (5 + 2) X 2 = 14 cm.

 $A = 5 \times 2$ = 10 cm².



P = (6 + 5) X 2 = 22 cm,



Lesson

Something Is Missing!

- 1 a 34 cm, 70 cm². 9 m, 54 m².
 - **©** 8 cm , 96 cm². **₫** 9 cm , 26 cm.
 - 6 dm , 28 dm.
- 2 a 24 cm , 36 cm². b 7 cm , 49 cm².
 - © 8 mm, 32 mm.

- 3 P = 40 cm, $A = 70 \text{ cm}^2$.
- 25 cm 20 cm
- 5 1/2 P = 60 m. 30 m L = 60 - 30 EQM

Lesson 🕕

Odd Shapes

- 1 P = 86 cm, $A = 280 \text{ cm}^2$.
- 2 P = 100 cm , A = 324 cm².
- 3 P = 52 cm, $A = 114 \text{ cm}^2$.

Lesson 5

Growing Dimensions

1 Hussam's Farm:

P = 30 m.

 $A = 50 \text{ m}^2$.

10 cm

Emad' Farm: P = 90 m.

 $A = 450 \text{ m}^2$.

30 cm

2 Length of the house = 40 ± 2

= 20 m.

Width of the house = 40 ± 4

= 10 m.

Area of the house = 20 X 10

 $= 200 \text{ m}^2$

Area of the land = 40 X 40

 $= 1,600 \text{ m}^2$.

Area of the garden = 1,600 - 200

 $= 1,400 \text{ m}^2$

3 Width of the first mural = $24 \div 8 = 3$ m.

Width of the second mural = 3 X 3 = 9 m

P = 34 m. $A = 72 \text{ m}^2$

Unit 5

Lesson 🗊

Understanding Multiplicative Comparison

- 1 2 5 times.
- (b) triple.
- 5 times.
- (1) triple.
- 7 times.
- 2 6 X 4 = 24
- \bigcirc 5 X 3 = 15
- \bigcirc 7 + 7 + 7 = 21
- 6+6+6+6+6=30
- 3 16,4
- **14,7,7**
- **6** 8.4.2
- **3** 27,9,3
- 4 3 7 7 7 7
- 0 4 4 4 4 4 4 4
- 888
- 0 10 10 10

Lesson 2

Creating Multiplicative Comparison Equations

- \bigcirc y = 4 X 3
- \bigcirc m = 2 X 7
- **6** $18 = 6 \chi$
- \bigcirc 24 = 4 v
- 48 = 8 %
- (1) 21 = 3 a
- $\frac{1}{100}$ 36 = 9 X m
- $2 = 5 \times 4$
- **b** $12 = 3 \chi$
- © 21 = 7 y
- **6** $\chi = 2 \times 4$
- (a) 18 = 6 m

Lesson 3

Solving Multiplicative Comparison Equations

- \bigcirc X = 4 X 8 . χ = 32
 - \bigcirc y = 5 X 6 , y = 30
 - $0 \text{ m} = 2 \times 9$, m = 18
 - 18 = 6 a , a = 3
 - \bigcirc 36 = 4b . b = 9
 - 042 = 7n, n = 6

- 2 a 15 = 3a , a = 5
 - $b = 5 \times 3$, b = 15
 - © 20 = 5a , a = 4
 - **1** 24 = 3y , y = 8

Lesson

Commutative Property of Multiplication

- **1 a** 7
- 6
- **6**
- 9
- **2 a** 8
- 10
- **6**
- 8
- $35 \times 6 = 6 \times 5$
- $\bigcirc 5 \times 8 = 8 \times 5$

Lesson 5

Patterns of Multiplying by 10s

- **a** 0
- 0
- **9** 1
- 9
- 7
- **1**
- **2 a** 80
- **6** 900
- 6,000
- **120**
- 2,000
- 000,000
- **3 a** 10
- 1.000
- **G** 100
- **100**
- **1**0
- **1**0

Lesson 6

Exploring Pattens in Multiplication

- 1,200
- 0 1,500
- **6** 40.000
- 10,000
- 100,000
- **1** 400,000
- **2 a** 50
- 60
- **6** 500
- 20
- 5000
- **100**
- 3 1,000 X 2 = 2,000 mm.

Exploring More Pattens in Multiplication

- (1) (3) (5 X 3) X 2 = 15 X 3 = 30
- **(3 X 4) X 2 = 12 X 2 = 24**
 - **3** 2 X (5 X 4) = 2 X 20 = 40
 - **10** X (6 X 5) = 10 X 30 = 300
- **2 3**,5
- **5** 3,4
- **©** 7,9
- 7.2
- \bigcirc 6 X 2 X 3 = 6 X (2 X 3)
 - $= 6 \times 6 = 36 \text{ eggs}.$
- $4 \times 2 \times 5 = 4 \times (2 \times 5)$
 - $= 4 \times 10 = 40 \text{ bottles}.$

Lesson 8

Applying Patterns in Multiplication

- 10
- 100
- **6** 8
- **3** 5
- **6**0
- 2 240
- 240
- **9** 4,000
- 6,300
- **6** 40,000
- **1** 42,000

Unit 6

Lesson

....

Identifying Factors of Whole Numbers

- **1 1 1 2 3 4 5 8 10 20 40**
 - **(**31, 2, 3, 4, 6, 9, 12, 18, 36)
- **2 3** 1, 5, 25
- **b** 1, 2, 3, 4, 6, 8, 12, 16, 24, 48
- **1,19**
- 3 10, 20, 30
 - (b) 1 5
- @ 2,5,10
- **a** 2
- # 5
- .5

Lesson 2

Prime and Composite Numbers

- **a** 3.5
- **(**) 2,3,6,9
- **2.5**
- 0 2,3,6,9
- **2.5**
- **3.9**
- 2 2, 3, 5, 7, 11, 13, 15, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97
- **(3)** (a) 1, 2, 7, 14
- (Not a prime number)
- **(b)** 1, 2, 23, 46
- (Not a prime number)
- **9** 1, 2, 11, 22
- (Not a prime number)
- **1**,59
- (prime number)
- (a) 1, 2, 5, 10, 25, 50 (Not a prime number)
- 1,29
- (prime number)
- 28
- 48
- **3**5

Lesson

Greatest Common Factor (G.C.F)

- **1 a** 4
- 10
- **9**7
- **1**
- Largest number of groups = (G.C.F) = 9

Number of boys in each group

 $= 27 \div 9 = 3$ boys.

Number of girls in each group

- $= 36 \div 9 = 4$ girls.
- Number of snacks

(G.C.F) = 12

Number of apples in each

package = $24 \div 12 = 2$ apples.

Number of candy in each

package = $36 \div 12 = 3$ candies

Identifying Multiples of Whole Numbers

- 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40
- 2 0, 5, 10, 15, 20, 25, 30, 35, 40
- 3 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, 88, 92, 96, 100.
 - **(b)** 10, 20, 30, 40, 50, 60, 70, 80, 90, 100.
- (1) (a) 0, 16, 32, 40, 56, 64, 72, 80.
 - **(b)** 0, 6, 12, 18, 24, 30, 36, 42, 48, 54, 60.
 - **6** 0, 7, 14, 21, 28,
 - **1** 27, 54, 99, 36, 45.

Lesson

Common Multiples

- 0, 6, 12, 18
- 2 0, 12, 24
- 3 a 8, 16
- 10.20
- 24, 48
- 42,84
- 40, 50, 60, 70
- 48, 60, 72, 84
- **©** 72, 96, 120

Lesson 6

Relationships Between Factors and Multiples

- - 24
- 27
- 2,3 are factors of 6 or 6 is a multiple of 2,3.

Unit 7

Lesson

The Area Model Strategy

- **a** 64
- 84
- 170
- 2 a 120
- **522**
- 268

3 702

686 4 138

Lesson 2

The Distributive Property

- 1,248
- 2.244
- **9** 47,106
- **10,748**
- 2 3,000
- 1,944
- 9,425
- 39,696
- 980 cm.

Lesson

The Partial Products Algorithm

- 1 2,048
- 23,916
- **©** 567
- **5,616**
- 500
- 76,185

Lesson

The Standard Multiplication Algorithm

- 1 (1) (2) 1,200 , 1,422 , 1,422
 - 63,000 , 66,825 , 66,825
- 2 a 336
- 1,944
- **9** 29,232
- **3** 216
- 1.192
- **1** 39,330

Lesson

Connecting Strategies

- 1,548
- **(b)** 270
- **9** 4,298
- **1** 21,375
- 25.040
- 2 3,192
- 372
- 1,640
- **372**

Lesson

Two-Digit Multiplication

- 2,960
- 2,800
- 5,740
- **3 a** 7,650
- 810 **(**) 700
- **(1)** (a) 450 840
- 2,400

Area Models and 2-Digit Multiplication

- **1 2,205**
- 3,827
- **1.932**
- 1.813
- $215 \times 6 = 1,290$
- $35 \times 38 = 1,330$

Lesson

Algorithms and 2-Digit Multiplication

- 3 1,000 , 1,484 , 1,484
 - **(b)** 2,400 , 3,216 , 3,216
 - 2,700 , 3,040 , 3,040

Lesson 9

Putting It All Together

- $10 \times 2 = 420 \text{ kg}$. 420 - 130 = 290 kg.
- 2 + 8 = 14 km $14 \times 6 = 84 \text{ km}$.
- $3 76 \times 3 = 228 \text{ seats}$ 228 - 53 = 175 seats 76 + 228 + 175 = 479 seats.
- $40.65 \times 3 + 55 \times 2 = 305 \text{ km}$. 500 - 305 = 195 km.
- 69 270 70 = 200 km200 + 270 + 20 = 670 km

Lesson 10

Exploring Remainders

- **1**, 4, 6, 1
- 0.5.0
- **©** 28,5,5,3
- 6 16.3.5.1
- 6 15, 2, 7, 1
- $260 \div 40 = 1$
- R 20

Number of buses = 2.

Number of empty seats

- =40-20=20
- $248 \div 5 = 9$
- R 3

Number of boxes = 10 boxes.

Lesson 11

Patterns and Place Value in Division

- **1 a** $45 \div 9 = 5,500$ **b** $15 \div 5 = 3,3,000$
- **2 a** 300
- 500
- **2.000**
- 500
- $9 \times 90 = 810$.

All workers can't ride the same metro.

- $360 \div 6 = 60$ patties.
- 6 540 ÷ 9 = 60 boxes.

Lesson 12

The Area Model and Division

- **a** 14
- 22 R2.
- 152 R1.
- 400
- 2 868 ÷ 8 = 108 R4.
- 492 ÷ 4 = 123 cars,

Lesson 18

The Partial Quotients Algorithm

- 16 R3
- 28
- 125
- @ 234 R1
- 2.312

Lesson

- 1 2.092 R2
- $2480 \div 3 = 160 \text{ cups}$
- $31,026 \times 5 = 5,130$ cans. $5,130 \div 2 = 2,565$ cans.

The Standard Division Algorithm

- - 600,900 200,300
 - 200.240 50.60
 - 4,000 , 6,000 2,000 , 3,000
 - 4,000 , 8,000 1,000 , 2,000
- **a** 13
- 24 R1
- 152
- 139 R3

- 2.819
- **3.269**
- **2** $784 \div 8 = 98$ passengers.

Division and Multiplication

- **1 a** 3 100 200 169
 - 6 2 60 70 66
 - **©** 3 600 700 608
 - **6** 3 600 700 603
- 2 192 3 100 200
 - 6 93 2 90 100
- 3 $219 \div 3 = 73 \text{ km}$.

Lesson 16

Solving Challenging Story Problems

- $14 \times 6 = 84 \text{ kg}$
 - 84 + 14 = 98 kg.
 - $98 \div 7 = 14$ bags.

Number of bags = 14 bags.

- 347 x 4 = 1,388 balls
 - 1,388 799 = 589 balls.
- 3 = 7 bottles
- 4 814 × 3 = 2,442 pages.

2,442 + 814 = 3,256 pages.

Unit 8

Lesson 🕕

Problem-Solving Strategies

- 6 468
- 8,774
- **©** 1.116
- **113**
- 2 6 5,159 , 4,000
 - **b** 5,556 , 4950
 - 762, 1,000
 - @ 210 R2 200,300
- 6 51,613
- 20,715
- 1,536
- **149**

Lesson 2

Which Comes First?

- **a** 22
- 5
- 15

- **15**
- **9**1
- 90

- 6
- **1**2
- **1** 23

- **1** 9
- 10
- 18

- **1**
- **1**4
- 2

- 10
- 6
- **6** 5
- \bigcirc 34, \triangle = 10, = 6, \bigcirc = 4
 - **(b)** 58, $\Re = 6$, $\triangle = 3$, $\frac{4}{5} = 11$
 - **©** 98. = 4. ▶ = 9. = 10
 - \bigcirc 38, = 7, \bigcirc = 3, = 4

Lesson

Order of Operations

- 26
- 21
- **3**

- **1**2
- 11
- 28
- 27 **0** 1
- **1**5

Lesson

The order of Operations and Story **Problems**

- 1 246 24 = 222 bars.
 - $222 \div 6 = 37$ bars.
- $214 \times 14 = 169 \text{ km}$.
 - 196 + 56 = 252 km.
- 3 27 + 12 = 39 minutes.
- $5 \times 39 = 195$ minutes.
- 172 + 8 = 180 persons
 - $180 \div 9 = 20 \text{ microbuses}.$
- **198** 18 = 180 berries.
 - $180 \div 6 = 30 \text{ pancakes.}$
- Answer by yourself.

Exercises Book

Exercises on

Unit 1

Lessons



		Digit	Number	Numeral
a	8	1	1	1
0	125		1	1
0	Eight			1
(1)	Two hundred fifteen			1
(2)	3	1	1	1
0	45		1	1
9	5 + 200			1

② **a** 98,762 26,789 **b** 84,320 20,348 **b** 95,431 13,459 **d** 87,520 20,578

Ď.				
3	ı	Number	Place Value	Value
	a	422,485	Tens	80
	0	38,250	Thousands	8,000
	0	83,115	Ten-thousands	80,000
	(1)	700,810	Hundred	800
	(2)	415,128	Ones	8
	•	820,200	Hundred-thousands	800,000
	9	210,682	80	80

- 4 a < b < c < c < d > b < c < c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d > c < d >
- 6 a 8 Millions 104 Thousands 288 Eight million, one hundred four thousand, two hundred eighty eight.
 - 43 Millions 180 Thousands 5 Forty three million, one hundred eighty thousand, five.
 - © 518 Millions 129 Thousands 208 Five hundred eighteen million, one hundred twenty nine thousand, two hundred eight.
 - 6 5 Milliards (Billions) 2 Millions -403 Thousands - 750 Five milliard (billion), two million, four hundred three thousand, seven hundred fifty.

- O 7 Milliards (Billions) 365 Millions 429 Thousands - 968 Seven billion, three hundred sixty five million, four hundred twenty nine thousand, nine hundred sixty eight.
- (a)
 25,250,200
 (b)
 120,025,012

 (c)
 300,005,003
 (d)
 600,200,003
 - **(a)** 5,006,004,004 **(f)** 9,025,125,225
- ① a 456 , 254
 ① 7 , 24 , 258

 ② 14 , 105
 ② 9 , 5 , 2
- **a** 23 , 15 **b** 7 , 0 , 21
- Tens.
 Ten-thousands.
 Millions.
 Ones.
 - Hundred-thousands.
 - 1 Hundreds. 9 Ten millions.
 - h Milliards (Billions).
- Hundred-millions.
 Millions.
 528.745.432
 789.654.026
- - **9** 9,521,005,136 **6** 8,852,963,852
- **1** 520,753,159 **1** 8,201,0<u>9</u>3
- (1) (2) 99,999 (5) 1,000 (6) 987,654 (6) 102,345
- **6** 6,000 **6** 30,000
- Thousands.Ones.86,53210,357
- (a) 77,732 (b) 444,468 (c) 450,050,000 (d) 25,000,020
- ② 2 , 40 , 200 ② 7 , 458 , 115 , 251 ③ Seventy seven million, two thousands, two
- hundred five
- 305,014,007
 Ten-millions.
 Ten-thousands.
 7
 9
- 11 a Number. b Numeral (numerical form). c 9
 - 9,999
 10,000
 98,765
 1,023
 7
 0

- Tens.
- Hundred thousands.
- **98,761**
- 10,458
- 999,971
- 22,268
- 12,015,020

- £5,003,045,009
- S Milliards (Billions) + 400 Millions + 3 Thousands + 25
- 4,605,090,015
 - 0 6,000,500,030
- V Ten-thousands. W 2

Worksheet

- 1 @ 317
- 000,000,000
- 999,999
- **1**0
- numbers, digits.
- 2 a digit, number, numeral.
 - Thousands.
- **©** 10,234
- 73.210
- **6** 525
- 3 @>
- ♠ <</p>
- O >
- 6 =
- 4 10,000 (99,999 (100,100 (990,000

Lessons 344

- Ones
- . 8.
- Hundreds
- , 100.
- Ten-thousands
- . 80,000.
- Millions
- , O.
- Milliards (Billions) 7,000,000,000
- Tens
- . 60.
- Thousands
- , 7.000.
- Hundred-thousands 500,000.
- Hundred-millions 400,000,000.
- 1 Ten-millions
- < O.
- **2 a** 8
- 600
- Continuo e la contra de a contra del la contra
- d Hundred-thousands.
- 000,000,000
- £ 2,000,000,000
- Tens.
- Ten-thousands.
- 1,000,000
- Hundred-millions.
- 300
- **6** 500.000
- © 200,000,000
- **600**

- 70,000
- 10,000,000
- 90,000,000
- 100,000

- **0** 50
- 10
- 08
- 9.000
- <u>00</u> 1.000
- **(4) (3)** 5
- 000,000
- 6,000,000
- **100**
- 300
- **9** 9
- **9** 10
- 6 a Hundred-thousands.
 - Millions.
- Ten-thousands.
- Ten-millions.
- 10
- 10,000
- 9 1,000
- 1,000
- (1) (2) 87 X 10 = 870
 - 603 X 100 = 60,300
 - © 350 X 10 = 3.500
 - **(1)** 7,020 X 100 = 702,000
 - (a) 6,200 X 1,000 = 6,200,000
 - **1** 4,000,700 X 100 = 400,070,000
 - 953 X 10 = 9.530
 - **1** 9,702 X 100 = 970,200
 - 1 953 X 10 = 9,530
 - **1** 900,005 X 10 = 9,000,050
 - **(800 X 100 = 80,000)**
 - 15,000 X 1,000 = 15,000,000
 - 100,000,000 X 10 = 1,000,000,000
- **(7)** (a) 9,999,999
- 1,000,000
- **(3)** 99.999.999
- 10,000,000
- 999,999,999
 - 100,000,000
- **(1)** 9,999,999,999 1,000,000,000
- 9,876,543
- _ 1,023,456
- 1 99,999,999
- _ 11,111,111
- 987,654,321
- 102,345,678
- 8.764.320
- _ 2,034,678 _ 245,689
- 0 986.542 1 99,999,942
- _ 22,222,249
- **®** 99,999,998
- 10,000,000

_ 10,000,001

- 0 99,999,999
- Tens.
- 000.008 60,000
- 300,000,000
- 000,000,6
- 000,8

- 9 400,000
- **1** 40
- **6**0
- 200,000,000
- **(3** 5.000
- 1.000
- Hundred.
- Thousands
- 0 7,300
- 320,000
- Q 1,500,000,000
 Q 30,000,000
- 205,678
- 0 1,000

Worksheet

- 1 203,457
- 100
- 9,999,999
- 25,000,000
- Ten-thousands.
- 2 @ 45.000
- **(b)** 99,999,998
- 1,000
- 400,000
- 08
- 3 (b)
- (d)
- (a)
- 4 (e)
- (c)

Lessons 546

- 🕕 🧿 Seven Milliard (billion), two hundred million, one hundred fifty thousand, two hundred eight.
 - Four hundred million, three hundred thousand two hundred.
 - One million, five hundred thousand.
 - Twenty million, fifty thousand, three.
 - Four milliard (billion), six million, twenty thousand, three hundred twenty six.
 - Two milliard (billion), thirty million, seven hundred thousand, six hundred,
 - Two hundred million, seven hundred thousand
- 2 6 500,020,050
- **(** 4,007,005,009
- C 18,090,000
- **1**,000,520,040
- 8,050,060,307
- 9,000,800,300
- 9,030,060,020
 3,000,300,000
- 3 400,000,000 + 100,000 + 20,000 + 600 + 3
 - **b** 5,000,000,000 + 200,000,000 + 90,000 + 50

- © 20,000,000 + 700,000 + 50,000 + 600
- 200,000,000 + 50,000,000 + 500 + 20 + 4
- 6,000,000,000 + 800,000,000 + 10,000,000 + 5,000,000 + 400,000 + 30
- 9,000,000,000 + 30,000,000 + 5,000,000 + 900,000 + 5,000 + 300 + 6
- 9 100,000,000 + 90,000,000 + 600,000 + 20,000 + 4,000 + 10 + 7
- **6** 60,000,000 + 3,000,000 + 500 + 90 + 7
- a Four milliard (billion), eighty million, one hundred seven thousand, two hundred fifty.
 - 4,000,000,000 + 80,000,000 + 100,000 + 7,000 + 200 + 50
 - 6 Four milliard (billion), one hundred twenty five thousand, six hundred ninety five.
 - 4,000,000,000 + 100,000 + 20,000 + 5,000 + 600 + 90 + 5
 - 350,905,255
 - 300,000,000 + 50,000,000 + 900,000 + 5,000 + 200 + 50 + 5
 - 3,600,070,015
 - 3,000,000,000 + 600,000,000 + 70,000 + 10 + 5
 - 6 700.054.325
 - Seven hundred million, fifty four thousand, three hundred twenty five.
 - 7,204,030,293
 - Seven milliard (billion), two hundred million, four, thirty thousand, two hundred ninety three.
- (5) (3 x 100,000,000) + (2 x 100,000) + $(5 \times 10,000) + (1 \times 100) + (2 \times 1).$
 - (7 x 1,000,000,000) + (5 x 10,000,000) + $(8 \times 100) + (6 \times 10) + (5 \times 1)$
 - (3 x 1,000,000,000) + (6 x 1,000,000) + $(8 \times 10,000) + (5 \times 100)$
 - **1** 2,090,807,376 **1** 3,600,053,080
 - 256,009,483

- 6 a 8,007,206,059
 - Eight milliard (billion), seven million, two hundred six thousand, fifty nine.
 - 8,000,000,000 + 7,000,000 + 200,000 + 6,000 + 50 + 9
 - (8 x 1,000,000,000) + (7 x 1,000,000) + $(2 \times 100,000) + (6 \times 1,000) + (5 \times 10) + (9 \times 1)$
 - 920,702,800
 - 900,000,000 + 20,000,000 + 700,000 + 2,000 + 800
 - (9 x 100,000,000) + (2 x 10,000,000) + $(7 \times 100,000) + (2 \times 1,000) + (8 \times 100)$
 - 39,800,202
 - Thirty nine million, eight hundred thousand, two hundred two.
 - 2.890.105
 - Two million, eight hundred ninety thousand, one hundred five.
 - (2 x 1,000,000) + (8 x 100,000) + $(9 \times 10,000) + (1 \times 100) + (5 \times 1).$
- Thirty five million, two hundred thousand. eight hundred ten.
 - Eight hundred seven million, fifty thousand, three hundred two
 - 650,013,526
 7,400,002,030
 - (a) 100,000,000 + 50,000,000 + 200 + 30
 - **(1)** 8,020,802,080 **(9)** 6,060,060,660
 - **(1)** 3,050,012,245 **(1)** 5,500,050,500
 - **1** 305,700,016 **1** 5,006,009,007
 - 1 330 million, 330 thousand, 330

Worksheet

- 1 a Three hundred fifty million, three hundred fifty.
 - **b** 4,053,004,503 **c** 435,400,305
- - **1** 260,026,026
- 000,000,08
- 2 @ Five milliard (billion), five million, fifty thousand, five hundred.
 - (4 x 1,000,000,000) + (3 x 10,000,000) + $(9 \times 100,000) + (5 \times 1,000) + (7 \times 10).$

- Ten thousands. (5 x 1,000,000).
- (3 (7 x 100,000,000) + (7 x 10,000)
- 3 (b)
- (d)
- (a)
- 4 (e)
- (c)
- 4 1 3,090,200,240
 - Three milliard (billion), ninety million, two hundred thousand, two hundred forty.
 - **3**,000,000,000 + 90,000,000 + 200,000 + 200 +40
 - 4 (3 x 1000,000,000) + (9 x 10,000,000) + $(2 \times 100,000) + (2 \times 100) + (4 \times 10)$.

Lessons



- (1) (a) > 6

 - **()** >
 - (9) =
 - **(i)** > **(3** <

(1) < (1)

(a) >

() < **0** =

O >

0 =

0 < <u>(ii)</u> > **②** <

6

- **2 a** 792,689
- 280
- **(9** 1,000,020,000 **(d)** 75,000
- **3 a** 200,200 < 256,256 < 300,000
 - **6** 600,000 < 500,000 < 400,000
 - 405,405
- 4.000,500
- **3,000,754 < 4,000,754 < 5,000,754**
- **150,452 > 150,352 > 150,252**
- **45,000** , 45,000 , 550,000 , 25,030,000
 - **(b)** 154,200 , 205,687 , 360,548 , 545,352
 - © 557,589 · 557,859 · 557,895 · 557,985
 - d 500,000 · 500,005 · 500,500 · 505,550
- **a** 999,999 , 909,909 , 900,990 , 900,000
 - **(b)** 55,512 · 55,251 · 55,152 · 55,125
 - **©** 300,020,010 · 300,002,100 · 200,300,100 · 200,030,001

10		
U	The Order	Standard Form
	4	530,000,450

3	503,400,005	
5	530,405,000	
1	5,030,450	
2	50,030,045	

The Order	Standard Form
5	99,990,090
2	9,000,000,090
3	999,000,000
1	9,000,090,000
4	900,900,900

The Order	Standard Form
3	5,000,300,009
4	5,000,300,090
5	5,000,300,900
2	5,000,003,900
1	5,000,003,009

40%		
U	The Order	Standard Form
	4	1,000,503,205
	5	1,000,030,250
	2	1,050,325,000
	1	1,500,030,250
	3	1,032,005,000

- 10 a <
- 6
- **()** >

- **10,000,000**
- 35,202,000
- 199,999,999
- 100 million.

Worksheet | | |

- 1 @ 2,000,003,003
- Ten-thousands.
- **©** 200,045
- **1**,000,000
- 9,876,534
- **2 3** 900,000,000 + 200,000 + 6,000 + 8.
 - 4 Thousands , 5 Tens , 405,000
 - Hundred-thousand
 - Thousands.
 - @ Eight million, eight thousand
- 3 (1) <
- 6
- O >

- **(i)** =
- (3) >

4 10,002,005 : 10,020,500 : 10,025,000 : 10,200,050

Lessons



- **1 a 400,000,000**
- 7,000,000,000
- © 20,000,000
- 000,000,8
- 000,000
- 4,000,000,000
- 9 400,000,000
- 2 a 9,000,654
- , 9,000,000
- 80,703,008
- 000,000,08
- © 830,065,400 °
- 000,000,008
- 9,080,050,563
 - 9,000,000,000
- 600,850,88
- 000,000,08
- 452,025,315
- 400,000,000
- **(1)** 6,650,019,400 (6,000,000,000
- 3 (a) Midpoint: 345
- . 343 ≈ 340
- Midpoint: 475
- . 472 ≈ 470
- Midpoint: 915
- 912 ≈ 910
- Midpoint: 4,295
- . 4,298 ≈ 4,300
- (1) (a) Midpoint: 850
- . 829 ≈ 800
- Midpoint: 250
- . 293 ≈ 300
- Midpoint: 1,250
 - € 1,280 ≈ 1,300
- (i) Midpoint: 6,950
 - € 6,988 ≈ 7,000
- (a) Midpoint: 5,500
- € 5,425 ≈ 5,000

 - **(b) Midpoint:** 6,500 € 6,774 ≈ 7,000

 - © Midpoint: 18,500 € 18,524 ≈ 19,000

 - **1 Midpoint:** 29,500 € 29,954 ≈ 30,000
- (i) (ii) Midpoint: 150,000
 - $178,652 \approx 200,000$
 - Midpoint: 450,000
 - $462,685 \approx 500,000$
 - Midpoint: 950,000
 - $972,821 \approx 1,000,000$
- (a) Midpoint: 45,000,000
 - 45,284,564 ≈ 50,000,000
 - Midpoint: 5,000,000
 - $2,326,120 \approx 0$

- - 5,205,452,152 ≈ 5,000,000,0000
 - (i) Midpoint: 4,500,000,000
 - 4,815,600,002 ≈ 5,000,000,000
- (a) 50
- 80
- 850
- 970
- **9** 7,550
- **1** 2,600
- **9** 76,000
- 100,000
- 000.8
- 6.000
- **©** 5,000
- 10,000
- 29,000
- 100,000
- 100,000
- 456,000
- (1) (a) $72 \cdot 40 + 20 = 60 \cdot 50 + 30 = 80 (\checkmark)$
 - **b** 69, 20 + 40 = 60, 20 + 50 = $70 (\checkmark)$
 - \bigcirc 47, 10 + 20 = 30, 20 + 30 = 50 (\checkmark)

 - 600 , 300 + 200 = 500 , 300 + 300 = 600 (√)
 - \bigcirc 480, 100 + 300 = 400, 100 + 400 = 500 (\checkmark)
 - ① $74.80 10 = 70 (\checkmark).90 20 = 70 (\checkmark)$
 - (a) 42,800 700 = 100,800 800 = 0 (✓)
 - \bigcirc 97, 400 300 = 100 (\checkmark), 500 400 = 100 (\checkmark)
 - 1000 200 = 700 (**/**) 1000 200 = 800
- 6 5,000
- **6** 300,000
- 000,000
- **1,000,000**
- 90.000
- **1**0
- 1,000
- 1,000,000
- 1,000
- 1,000,000
- (3 999 ≈ 1,000
- **1** 9,266 ≈ 9,000
- $0.0651 \approx 700$
- $0.14,875 \approx 15,000$
- B 1.000
- 000,000
- © 100,000
- 6,000,000
- 100
- 100
- (9) 10.000
- **(1)** 454
- 1.150

Worksheet

- 000,8 📵
- 1,000,000
- **3** 100
- **1**0
- 2,100,000

- 2 (3 800,000,000 + 90,000,000 + 6,000,000 + 3.000 + 10 + 5
 - billions.
- **©** 10,600 , 11,000
- **10,000**
- 549
- 3 Three hundred thirty thousand thirty million -30,030,000 - 3,000,030,000

Number	To the Nearest 10	To the Nearest 100	To the Nearest 1,000	To the Nearest 10,000
3 56,452	56,450	56,500	56,000	60,000
6 805,605	805,610	805,600	806,000	810,000
9 ,499	9,500	9,500	9,000	10,000
3 9,809	9,810	9,800	10,000	10,000
1 0,200	10,200	10,200	10,000	10,000

Exercises on

Unit 2

Lesson

- **a** 6
- Commutative,
- **6** 9
- Associative.
- **9** 8
- Neutral Element.
- 27
- Commutative.
- 9
- Neutral Element.
- **1** 41 .94
- Associative.

- 39 0
- Commutative.
- Neutral Element.
- 0 300,125
- . Associative.
- 2 a 15 + 27 + 85 = 15 + 85 + 27 "Commutative" = (15 + 85) + 27"Associative"
 - = 100 + 27 = 127
 - **b** 755 + 615 + 245 = 755 + 245 + 615

"Commutative"

= (755 + 245) + 615

"Associative"

= 1,000 + 615 = 1,615

 \bigcirc 42 + 908 + 92 = 42 + (908 + 92)

"Associative"

- 244 + 0 + 256 = 0 + 244 + 256 "Commutative" = 0 + (244 + 256) "Associative" = 0 + 500 "Neutral Element"
- 244 + 0 = 0 + 244 "Commutative & Neutral Element" = 244

= 500

- - Commutative. Commutative
 - Associative. Neutral Element.
 - Associative. Associative.

Worksheet

- 1 a 45 Commutative
 - 6 85 ، Associative.
 - 6 8,000,000.
- 30,000
- (a) 0 . Neutral element.
- - **©** 10,000
- Associative.
- **②** 550,000,005
- 3 @>
- **()** >
- **G** <
- (a) >
- **4** 3,458,582 , 3,548,258 , 3,584,852 , 3,854,852
- **5** Midpoint: 4,500
 - $4,458 \approx 4,000$

5.000 ‡ 4.458 4.500 4.000

Lessons

- **1 a** 40 + 70 = 110
- \bigcirc 90 40 = 50
- 100 + 500 = 600
 900 200 = 700
- \bigcirc 900 200 = 700
- \bigcirc 4,000 + 6,000 = 10,000
- 9,000 3,000 = 6,000
- **(b)** 20,000 + 30,000 = 50,000
- **1** 200,000 100,000 = 100,000
- 2 a 120
- \bigcirc 80 + 40 = 120

- **(2)** 100 20 = 80 **(3)** 200 + 300 = 500
- **(2)** 400 300 = 100 **(1)** 2.000 + 4.000 = 6.000
- (9) 78,000 69,000 = 9,000
- 3
- 22 + 10
- 223 + 10

= 233

= 873

25 + 30

- = 32123 + 100
- 300 + 573
- **1,000 + 353**

= 873

= 55

9 47 - 10

= 233

- 6 87 50
- 486 100

- = 37 226 - 100
- 787 700

= 37

8,458 - 1,000

= 386

- = 126
- = 87
- = 7,458

- 0
- 3 56 + 20 + 4
 45 + 30 + 7
- **256 40 5**
- = 76 + 4 = 80 = 75 + 7 = 82
- = 216 5 = 211

1 986 + 200

- 564 40 5
 542 + 200 + = 524 ~ 5
 - 30 + 1
 - +40 + 1

- = 519
- = 742 + 30 + 1

= 772 + 1

= 1,186 + 40 + 1= 1.226 + 1

= 1,227

- = 773
- = 2,975 50 3
- = 2,925 3
- = 2,922
- 3,175 200 50 3
 8,456 900 90 8
 - = 7,556 90 8
 - = 7.466 8
 - = 7,458
- 6,725 + 1,000 + 200 +
 - 30 + 4
 - = 7,725 + 200 + 30 + 4
 - = 7,925 + 30 + 4
 - = 7,955 + 4 = 7,959
- 3,957 2,000 200 -
 - 10 4
 - = 1,957 200 10 4
 - = 1,757 10 4
 - = 1,747 4 = 1,743

- **a** 5
- **6** 7 20
- **3 3**
- 6 **a** 90.695
 - **651.556**
 - 000,000,1
- 423,309
- **3** 1,821,202
- 1,200,000
- 573,224
- 560,513
- 0 9,642,915
- 1,000,000,000

Problem	To the Nearest 10	To the Nearest 100	To the Nearest 1,000
a 24,456	24,456	24,500	24,000
+ 13,428	+ 13,428	+ 13,400	+ 13,000
37,884	(√) 37,884	37,900	37,000
5 256,634	256,630	256,600	257,000
+ 885,365	+ 885,370	+ 885,400	+ 885,000
1,141,999	(/) 1,142,000	(√) 1,142,000	(√) 1,142,000
3 2,256	2,260	2,300	2,000
+ 3,815	+ 3,820	+ 3,800	+ 4,000
6,071	(🗸) 6,080	6,100	6,000
125,278	125,280	125,300	125,000
+ 289,132	+ 289,130	+ 289,100	+ 289,000
414,410	(/) 414,410	(/) 414,400	(√) 414,000

- (3) 9,400 + 7,200 = 16,600 / 9,372 + 7,245 = 16,617
 - **b** 458 + 367 = 825 / 370 + 460 = 830
 - © 855 + 855 = 1,710 / 900 + 900 = 1,800
 - **1** 511 + 619 = 1,130 / 500 + 600 = 1,100
 - 686 + 621 = 1,307 / 700 + 600 = 1,300

Worksheet 🔣



- 1 @ 100 . 124
- 100,000,100,10
- 90,000,000
- 9 , Associative.
- **9** 75,000.
- 2 0 100
- 000,800,008
- 98
- **(1)** 48
- Commutative.
- **3** 9,900,990 (1,000,000 (990,909 (100,000)
- **4** 800 + 400 = 1,200
 - 773 + 375 = 1,148

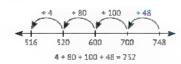
Lessons



- 330
- 654 324 = 330
- **(b)** 373
- **655**
- 1.903

- 4,440
- 4,237
- 6,354
- **1** 41,221

2 a 232



- 192
- 176
- 0 2,090

- **9** 4,104
- 1,093 40,331
- 9 4,137 **3 a** 4,531

Thousands		Ones	
Thousands	Hundreds	Tens	Ones
	-	-	4

- 1,501
- 10737
- 22,392
- 231,123
- **4 a** 36,160
- 542,681
- 9 177,761
- 185,952
- 218,103
- 99,999
- 9 506,000
- 317,142
- 1,019,522
- **1** 36,323,726
- 5 108, 200
- 00,1,000
- 10,000 ء 2,855 ق
- 6 a 621 476 = 145 trees.
 - \bigcirc 1,270 630 = 640 pounds.
 - © 1,028 542 = 486 boys.
 - **3**,256 2,804 = 452 pounds.
 - \bigcirc 1,200 235 = 965 cm.
 - \bigcirc 4,015 725 = 3,290 books.
 - 95,100 3,250 = 1,850 pounds.

Worksheet

- ② 9,000,500,400
- Millions.
- 243
- 0 10,000
- **100,000**
- **(b)** 4,060,109
- 999,999

- **6** 5,000
- Additive Neutral Element.

- 3 @ 90,911
- 50,060
- 9 11,671
- 710,436
- 4 754 245 = 509
- **5** 773 375 = 398 ships

Lessons 647

- $\mathbf{0}$ \mathbf{a} $\mathbf{x} = 1,200 700$
 - x = 500

000,8

9 5,950

- 9,500
- 1,148
- 68,125 ② 289,000

700

1.200

Х

- 2 6 58,620 + 58,620 = 117,240 meters. 193,120 - 117,240 = 75,880 meters.
 - **(b)** 167,029 + 67,370 = 234,399. 404,901 - 234,399 = 170,502
 - © 1,525 + 19,750 + 3,705 = 24,980 ants 30,520 - 24,980 = 5,540 ants.
 - 1,232 876 = 356 doughnuts.
- $3 \times = 207 125$

x = 82

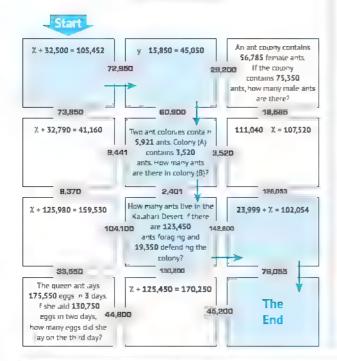
207 Х 125

- 511
- 5.161
- 1,131

- 590
- 1.173
- 253

- 388
- **1** 205
- 420

The Maze



Exercises on

Unit 3

Lesson



- Millimeter.
- Centimeter.
- Meter.
- Kilometer
- Millimeter.
- Centimeter.
- Meter.
- Meter
- Centimeter.
- Meter
- Meter.
- Answer by yourself.
- 3 25
- 2,038
- 3,005
- 6 8,550
- 10.035
- 20 . 007
- 5 . 74
- (i) 70 · 50
- **1** 602 , 50
- 1,258
- (3 20, 240
- 0 65 . 5
- 5 , 40
- 82.5
- 02.2
- **a** 745
- 902
- 2,008
- 5,090
- 8.750
- 030,060
- 40,007
- **(i)** 55
- **1** 67
- **1** 84
- 8 . 60
- 05.4
- 65 ، 50 👊

- 210,50
- 2 . 745
- 71, 25
- o 12 ، 500 ع
- 72.5
- S 10 . 8
- 15 · 5
- 6 Centimeter.

- 000,7
- **3 8**
- **6** 50,020
- 5,050
- 3,000
- (9) <</p>
- (a) <</p>
- **()** =
- \bigcirc 8 m = 8 x 100 = 800 cm.
- 10 km = 10,000 m = 1,000,000 cm.
- 250 dm = 2.500 cm = 25.000 mm

- 250 + 250 + 250 + 250 = 1,000 m = 1 km.
 - Number of hours = 4 hours.

Worksheet

- 1 @ Meter.
- Mass
- 250,050,005
- 2 km.
- 43
- 2 @ 40,000 , 25 , 40,025
 - 95 . 70
 - Capacity.
- Billions.
- **9** 54,600
- 3 (1) <
- ♠ <</p>
- (G) >
- (1) >
- (a) =
- 4) 1,500 cm , 25 m , 2,000 dm , 2 km.
- 5 2 km = 2,000 m = 20,000 dm = 200,000 cm.

Lesson

- 1 a Gram
- Gram.
- Kilogram.
- Kilogram.
- Gram.
- Kilogram.
- Answer by yourself.
- 3 6 5,200
- 8,007
- 15,015
- 20,200
- 3 , 250
- 60,24
- 200 60
- 0 10 . 6
- 4,000
- 20.000
- 300,000
- 680,000

- 3
- **1** 90
- 600
- **6** 905
- 1 3, 250
- 120 24 4 120
- (30, 20
- 0 300 8
- @ 3,245
- 15,020
- 12,150
- 20,100
- (a) Gram
- a ring
- **40,000**
- 200,000
- 60
- **3**
- 9 20,050
- 10,300

- 125,350 grams.
- 🕡 3 kilograms 👝 493 grams.
- 5,200 + 8,000 = 13,200 grams.

Worksheet



- 1 @ Kilogram,
- a desk.
- **9** 50
- **30.125**
- **6** 50,000
- 2 @ 9,999,999
- 5,004
- 56 , 240
- (3 x 100,000) + (1 x 10,000) + (2 x 100) + (5 x 1)
- 1,000,000
- 3 @>

9 <

- 6
- (i) =
- (a) =
- 4 4,300 + 3,000 + 900 = 8,200 grams

Lesson

- Milliliter,
- Liter
- Milliliter.
- Liter
- Liter.
- Milliliter.
- Answer by yourself.
- 3,450
- **12.050**
- **©** 20,008
- **12,500**
- **8**,56
- **1** 31 , 500

- 9 40 . 3
- 6,70
- **(1)** (a) 3,000
- 50,000
- 6 16,000
- 20.000
- 7
- 68
- **9** 15
- 200
- 08,20
- **1** 20 , 50
- (3) 100 c 9
- 10,16
- **3,500**
- 0 20,040
- 6 Milliliter.
- capacity 100,000
- **a** 5
- **1** 300
- 9 45,045

20,000

- 60,006
- **6** 50,000
- 35,130
- 50,000 35,130 = 14,870 milliliters

0 12,009

- 4,250
- **1**,050
- 4,250 + 1,050 = 5,300 milliliters.
- 500,000 (250,600 + 125,500)
 - = 500,000 376,100 = 123,900 milliliters.

Worksheet

- 10 10
- 50.000
- 9 14,014
- (a) >
- 75,000
- 2 @ 88,008,008
- **(b)** 20 , 250
- 205 . 0

- **(1)** 60
- **6** 50,020
- 3 @ 87,703
- 28,510
- **©** 100,000
- **6** 56,000
- 4 5,500,000 · 5,050,000 · 500,500 · 500,005
- **5** 2,000 660 = 1,340 milliliters.

Lesson 4

- 1 c 2 & 3 Answer by yourself.
- **4** 800
- 20
- **©** 5,000
- 200
- 3
- **6** 50
- 500
- 00,000
- **1** 50
- 5,000
- 2.000
- 0 40
- **@** 9
- 12,000

- 250
- 40
- 50
- **6** 50
- 3 2
- **(5) (3)** 120 **(4)** 1,200
- **100** , 10
- **30** , 300
- **1** 50 , 5
- (a) 350 (3.500
- (1) 200 a 20
- 700
 700

- (h) 60 , 6
- **1** 300 , 3,000 (3 110 , 1,100
- 900 , 90 **1** 700 , 70
- 6 800 cm.
- **1** 60 gm.
- 1,000 ml.
- 15,000 mm.
- 4,000 ml.

Worksheet

- 1 150
 - Twenty million, six hundred fifty thousand, sixty five.
 - 9
- **(1,000**
- 8,999,9999
- 2 @ 2,000
- **6** 505,005,005
- 4,200
- 765,430
- 500
- 3 (3 <
- (b) =
- **G** >
- (a) =
- 4 @ 56,600
- 20,547
- 5 65,250 gm.

Lesson 546

- 1 . 2 . 3 & 4 Answer by yourself.
- **6 a** 10
- 33
- 20
- **6** 32
- 68
- **1** 82
- 220
- **130**
- 0 85
- 230
- 615
- 123
- **a** 3 , 4
- **6** 5 , 1
- 06.6
- **1** , 5
- **a** 2 , 12
- 10 , 10
- **9** 1 , 35
- 3 20
- 0 9 , 20
- **1** , 5
- 3 , 15
- 06,20
- **a** 1:21
- 8:04
- 9:29
- 6 9:20
- 8:17
- **1** 9:14
- 9 1:11
- **(1)** 3:28
- 00:50
- 0 2:45
- 2:25
- 0.10:25
- 9:51
- 10:00
- 7:10
- 5:17
- 2:10
- 00:30

- (a) 240 hours.
- **144 + 13 = 157 hours.**
- 3 weeks.
- **19** + 19 + 19 = 57 hours.
- 4 hours.
- 11 hours = 660 minutes
- 120 + 15 = 135 minutes.
- 10 8:35+1:30=10:05.
- \bigcirc 7:42 6:30 = 1:12 One hour and 12 minutes.

Worksheet

- 1 @ Associative
- 3,000,099
- **©** 50
- 1,023,465
- 200
- 2 @ 6:00
- 610
- 100
- 450,462
- 6 5 . 4







4 5:35 + 1:15 = 6:50

Lessons



- 4 x 8 = 32
- $7 \times 3 = 21$
- $8 \times 4 = 32$
- 21:3=721 : 7 = 7
- $32 \cdot 4 = 8$ 32:8=4
- $9 7 \times 6 = 42$
- $2 \times 8 = 16$
- $6 \times 7 = 42$
- $8 \times 2 = 16$
- 42 : 6 = 7
- $16 \cdot 2 = 8$
- 42:7=6

- 16:8=2

2 a

Size in mm. X = 1 type of ants.

The Size of Ants

- Ghost Ants.
- **3**
- 9
- 3
- Answer by yourself.
- (a) The number of minutes.

- 15 min.
- 60 min.
- 150 min.
- 90 min.
- 950 (25 + 37) = 888 gm.
- 106 10 = 96 cm.
- 3,000 2,000 = 1,000 m = 1 km.
- \bigcirc 7,450 + 17,120 = 24,570 gm.
- 0 540 250 = 290 min.
- 1 300 + 500 = 800 mm = 80 cm.
- 12 20,000 17,000 = 3,000 gm.
- 13 4,000 (1,200 + 950) = 1,8,50 mL
- 10.5:10-3:45=1:25=85 min. Yes, he broke the rule. $85 - 80 = 5 \min$
- $15 \cdot 12 + 3 = 4 \cdot m = 400 \cdot cm$
- **1** 30 \times 5 = 150 min.
- \mathbf{m} 5,000 x 9 = 45,000 m = 45 km.
- 18 10 x 50 = 500 gm.
- 19 6 x 5,000 = 30,000 m = 30 km
- 20 8 x 30 = 240 min = 4 hours.
- 21 10,000 + 2,000 = 5 days.
- 22 5 x 20 = 100 km = 100,000 m.

Worksheet

- 1 3 5,009,999
- **6** 1
- 360
- Watches.
- 3,030,300
- Commutative.
- 2 3 75

- 3 . 15
- **6** 600,706,706
- 1:22
- Hundred-thousand.
- 3 (c)
- (a)
- (d)
- 4 (b)
- 4 5,005,050 , 5,005,500 , 5,050,050 , 5,500,005

Exercises on

Unit 4

Lesson

- 1 22 cm.
- 28 cm.
- 38 mm.
- 50 m.
- 80 m.
- 20 cm.
- 9 70 m.
- 120 mm.
- (2) (a) 200 cm.
- 8 m.
- © 56 m.
- 120 cm.
- @ 346 m.
- 50 m 3 Ε 2



- 0 15 m 10 m
- 20 m 53
- P = 12 x 4 = 48 cm.
- 14 cm
- \bigcirc P = 28 x 4 = 112 cm.
- 30 cm Ë
- $P = 30 \times 4$ = 120 cm.

- E 8
- (a) L + W + L + W
- DL.W
- GL, W
- 6 L . 4
- 6 16 cm.
- 6 50 m.
- ② 24 cm.
- 10 80 mm.
- (1) (2) $P = (L + W) \times 2$
 - \bullet P = (L x 2) + (W x 2)
 - P = L + W + L + W
 - 24
- 28
- **1** 24

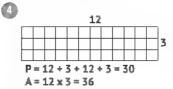
40

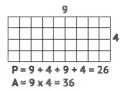
Worksheet

- **1 2** 5
- 7
- 28
- **@** 300,030,000
- 200
- @ @ 80 mm.
- **(b)** 40,020,030
- Hundred-thousand.
- 45 , 19 , Associative.
- 450
- 3 0 701,309
- **5** 350,062
- 502,000,473
- **1 799,999,999**
- \$40,000 \cdot 500,400 \cdot 450,000 \cdot 405,000 \cdot 400,500
- \bigcirc P = (2 + 5) x 2 = 7 x 2 = 14 m.

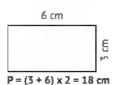
Lesson

- 1 24 cm².
- 40 cm².
- 54 mm².
- 120 m².
- (a) 400 m².
- 1 25 cm².
- 9 m².
- 1 81 cm².
- \triangle A = 8 x 20 = 160 cm².
- P = 6 + 6 + 2 + 6 + 6 + 2 = 28 m. $A = 12 \times 2 = 24 \text{ m}^2$.





9 cm 6 2 cm $P = (9 + 2) \times 2 = 22 \text{ cm}$



6 $P = (5 + 2) \times 2 = 7 \times 2$

= 14 m.

5 m	
	E
	7

 $P = (6 + 5) \times 2 = 11 \times 2$ = 22 m.

 $A = 5 \times 2 = 10 \text{ m}^2$.

6 m Ε $P = 5 \times 4$ = 20 cm.



- (a) LxW
- LxL
- 24 . 27
- **@** 200
- \bigcirc A = 3 x 3 = 9 cm²

 $A = 3 \times 7 = 21 \text{ cm}^2$.

 $A = 9 + 21 = 30 \text{ cm}^2$.

- (II) (a) A = LxW
- \bullet A = L x L
- **G** 49
- **3**2
- 24

Worksheet

- 1 @ 64
- **(5)** 70,000
- 6 400,040,004
- 18 cm.
- 45 + 30 + 4
- 2 @ 50 cm².
- **6** 50,000
- **6** 45,099,999
- **6** 5
- 100
- 3 (1) >
- (b) <</p>
- **(9** =
- 6 >
- $4 \circ A = 16 + 32 = 48 \text{ cm}^2$.
 - $P = (4 + 12) \times 2 = 16 \times 2 = 32 \text{ cm}$.
- $5 A = 6 \times 8 = 48 \text{ m}^2$.

Lesson

- 1 a 26 cm 40 cm². b 6 m 24 m².

 - 6 m , 42 cm².
 - 10 mm a 150 mm².
 - (a) 10 mm , 200 mm².

 - 1 7 cm , 26 cm². 9 cm , 32 cm.
 - 1 4 dm c 20 dm.
- 1 5 dm 26 dm.
- (2) (a) 16 cm (16 cm²). (b) 28 cm (49 cm²).

 - **©** 8 cm ⋅ 64 cm². **©** 5 m ⋅ 25 m².

 - 6 mm 24 mm, 9 mm 36 cm
- 3 + 8 + 4 + 5 + 4 + 3 = 32 meters.
 - $A = 12 + 32 = 44 \text{ m}^2$.

12 x 12 = 144

So, the side length = 12 cm.



 \bigcirc 110 ÷ 2 = 55 m

55 - 25 = 30 m.



- **6** W = $900 \div 45 = 20$ cm.
- $70100 \div 2 = 50 \text{ cm}$. W = 50 30 = 20 cm.
- 10
- 6
- **6** 5
- **6**
- 9
- **1** 20 9
- 6 8 **3** 48
- 24

- 4
- **1** 7
- 9 100
- 24

Worksheet

- 1 @ 9
- 98.765.432
- Additive Neutral Element.
- 0,000
- meters.
- 2 @ 28
- **6**5 50 65
- © 100,000 , 100 , 10
- **1** 218

- 6 541
- 3 (a) $P = 20 \times 4 = 80 \text{ cm}$ (A = 20 x 20 = 400 cm²).
 - **b** P = (8 + 4) x 2 = 12 x 2 = 24 cm . $A = 8 \times 4 = 32 \text{ cm}^2$.
- $4 A = 8 \times 4 = 32 \text{ km}^2$.

Lesson (

- - P = 58 cm . A = 150 cm².
 - P = 64 cm . A = 176 cm².
 - P = 76 cm , A = 256 cm².
 - \bigcirc P = 20 cm , A = 16 cm².
- P = 40 cm, $A = 60 \text{ cm}^2$.
- 1 P = 30 cm A = 32 cm².
- **Table (1):** $A = 2 \times 1 = 2 \text{ m}^2$.
 - **Table (2):** $A = 4 \times 1 = 4 \text{ m}^2$.

Table (3): $A = 2 \times 1 = 2 \text{ m}^2$. $A = 2 + 4 + 2 = 8 \text{ m}^2$.

Lesson 5

- 2 $A = 12 \times 4 = 48 \text{ cm}^2$. $P = (12 + 4) \times 2 = 32 \text{ cm}$.
- W = 20 ÷ 5 = 4 m. P = (12 x 2) + (15 x 2) = 24 + 30 = 54 m.
- P = (5 + 3) x 2 = 16 m. P = (10 x 2) + (6 x 2) = 32 m. A = 10 x 6 = 60 m².
- 5 $A = 18 \times 6 = 108 \text{ m}^2$. $A = 3 \times 2 = 6 \text{ m}^2$ $108 = 6 = 102 \text{ m}^2$.

The Maze

Start What is the area of A rectangular swimming A rectangle is 3 units a rectangle? that is pool, 3 meters wide. Fits wide and 4 times 3 units wide and its 8 ngth is 3 times its width | 12 length sidouble What is the area of the What is its length? as width? swimming pobl? 27 18 7 Ahmed painted a mural 6 meters ong and 3 meters A rectangular window, wide His second mural will wide and its ength is 300 cm wide and its be of the same (ength and 4 times its width. 24 lenoth is twice its width. width as the first one, What is the perimeter of the painting? Calculate the enoth of the window first one What is the pertmetof the second mura 7 36 144 600 The area of a rectangle is Using the following A rectangular court with 42 square cent meters and diagram, calculate the a width of 4 meters and a its length is 7 cm. A second area if you know that the length equal to rectangle has the 12 40 ength of the new 3 times its width. same length as the first rectangle will, What is the perimeter but its width is 3 times the first rectangle What is the of the rectangle? be the double. area of the second rectangle: 28 32 126 Calculate the perimeter of Calculate the perimeter of The a rectangle with a length a rectangle with a width of 10 cm and a width half of 20 units and a tenoth End 1ts ength 4 times its width

Worksheet

- 1 @ 999,971
- **5** 48
- **©** 5,050
- d mass.
- **(3)** 2
- 2 @ 26

- Thirty six million, two hundred fifty.
- **6** 5
- **100**
- 100
- 3 P = 72 cm , A = 210 cm²
- 4 W = 42 ÷ 7 = 6 cm , A = 18 x 7 = 126 cm²

Exercises on

Unit 5

Lesson 1

- 1 a seven times a six times.
 - b three times eight times.
 - \bigcirc 4 x 9 = 36 c nine times.
 - \bigcirc 3 x 7 = 21 seven times
 - **16**, 8, 16, 2
- **1** 56,7,56,8
- 2 a 18 is double 9
- 6 25 is five times 5
- 27 is nine times 3
- 28 is seven times 4
- @ 40 is five times 8
- 6 63 is seven times 9
- 9 72 is nine times 8
- \bigcirc 6 x 9 = 54
- **5** x 2 = 10
- **Q** 4 x 8 = 32
- \bigcirc 3 x 3 = 9
- \bigcirc 8 x 7 = 56
- \bigcirc 5 x 5 = 25
- (97+7+7+7+7
- 6 6 + 6 + 6 + 6 + 6 + 6
- 0 8 + 8 + 8 + 8
- 09+9+9
- (2+2+2+2+2
- 01+1+1
- (a) 45 is 5 times 9.
- (b) 8 is 2 times 4
- @ 36 is 6 times 6
- (1) 24 is 3 times 8.
- @ 21 is 7 times 3.
- **1** 20 is 4 times 5.
- 9 56 is 8 times 7.
- 18 is 9 times 2.
- - 5 5 5
 - **©** 3 3 3 3 3 3
 - 0 9 9 9 9
 - 0 6 6 6 6 6 6 6
 - 7
 7
 7
 7
 7
 7
 7
 7
 - **9** 5 5 5 5
 - 0 2 2 2 2 2 2

- 6 a 12 is four times 3
- 1 30 is six times 5.
- 8 . 24
- **4 x 5**
- (a) 3 x 8
- \bigcirc 10 + 10 + 10
- 9+9+9
- 1 32 is 4 times 8
- 1 30 is six times 5
- 3 3 | 3
- (a) triple.
- double,
- **30** , 10
- **1** 36 , 9
- 48 . 8
- 1 triple.
- (1) 6 x 9
- **6** 9
- 1 8 + 8 + 8 + 8 + 8
- 04+4+4
- (24 · 4
- 06.2

Worksheet

- 1 @ 98,765,432
- triple.
- 100
- **6** 8
- 9+9
- **200,000**
- 4 x 7
- © 14 , 35 , Associative.
- 6 x 7
- 24
- 3 (1) <
- **(**) =
- **G** =
- **(1)** >
- (a) >

- a 10 . 5 . 2
- **6** 16 , 2 , 8
- 24 , 8 , 3

Lessons (2+3

- $ab = 2 \times 6$
- $60 36 = 4 \times d$
- \bigcirc 28 = 7 x m
- $\frac{1}{100}$ 35 = 5 x n
- $0.48 = 6 \times k$
- \bigcirc 49 = f x 7
- $64 = p \times 8$
- $0.42 = a \times 6$
- $0036 = b \times 4$

- \bigcirc A = 4 x 6
- \bigcirc 45 = 5 x a

- \bullet 48 ÷ 8 = 6

- \bigcirc 45 ÷ 9 = 5
 - \bigcirc 30 ÷ 6 = 5
- \bigcirc 14 ÷ 7 = 2
- $69.54 \div 9 = 6$
- 9 48
- **18**
- 1 24
- 10
- \bigcirc a $x = 6 \times 3$, x = 18
 - $v = 4 \times 7$ y = 28
 - cz = 24
 - @ m = 5 x 9 , m = 45
 - \bigcirc 45 = 9 x a , a = 45 ÷ 9 = 5
 - \bigcirc 40 = 5 x b , b = 40 ÷ 5 = 8

 - (9) $12 = 3 \times m$, m = 12 3 = 4
 - $n = 21 = 7 \times n$, $n = 21 \div 7 = 3$
- **a** 24 = 3 x a
- $656 = 7 \times 6$
- **(1)** $y = 7 \times 3$
- \bigcirc 18 ÷ 3 = 6
- $42 \div 6 = 7$
- $928 \div 4 = 7$
- **6** 54
- (1) (a) $9 = 3 \times a$, a = 9 3 = 3
 - **b** $18 = 3 \times b$, $b = 18 \div 3 = 6$
 - \bigcirc 15 = a x 5 , a = 15 ÷ 5 = 3
 - \bigcirc 36 = m x 6 , m = 36 6 = 6
 - \bigcirc x = 2 x 8 , x = 16
 - $\bigcirc y = 5 \times 20 \quad y = 100$
- $\sqrt{a} = 3 \times 4$
- $n = 3 \times 6$
- **©** 15
- ① x = 3
- **a** 4
- four times 2

Worksheet I

- 1 (a) 3,000,025,200 (b) 6 times.

 - P = 4L.
- 24
- @8x4
 - 6 x a
- 2 3 500,000,000
 - © 35 , Commutative
 - 6 702,080,300
- 3 200,755 4 360,450 4 450,005 4 850,600
- 4 (a) 12 = 4a
- \bigcirc 20 = 5 x m
- **16 = 8y**
- \bigcirc 54 = 9z

Lessons 4

- **a** 5
- **6**
- **0 0**

6 0	a 40	1 600
9 7,000	(b) 300	0 240
1 4,000	(3) 1,500	0 24,000
0 30,000	1,500	0 210,000
1,000,000	40,000	120,000
⑤ 15,000	1 564,000	
2 a 3	5 7	G 6
d 12	9 9	() 4
9 0	(b) 0	0 8
100	® 9	1 40
@ 40	1,000	O 17
② 30	9 50	7 400
⑤ 900	1 500	0 600
0 1,000	0 1,000	8 145
3 a >	() =	G >
() =	(3) =	(1) >
9 =	() >	() >
() <	() =	() <
(ii) >	(1) =	O <
(2) =		
1 (b)	(d)	③ (a)
4 (e)	⑤ (c)	
5 a 20	5 200	G 40
6 9	6 0	6 500
6 2 x 100 = 200	mm.	

- 200 x 6 = 1,200 pounds
- 90 x 20 = 1,800 piasters
- $9 30 \times 5 = 150 \text{ books.}$
- $0 3 \times 4 = 4 \times 3$ $2 \times 6 = 6 \times 2$
- $0 3 \times 8 = 8 \times 3$ $4 \times 6 = 6 \times 4$

Worksheet

- 1 @ 40
- 4
- 000,1
- **d** 6 m = 48
- 6 85
- 2 @ 9,876,543
- **(b)** 300,000
- **6** 449,999,999
- **3** 500
- 6

- 3 @ 90,001
- **(b)** 35,182
- **9** 4,000
- 000,000
- 4 10 x 2 = 20 m.

Lessons 748

- 1 (6 x 2) x 10 = 12 x 10 = 120
 - $(5 \times 4) \times 6 = 20 \times 6 = 120$
 - \bigcirc (8 x 5) x 5 = 40 x 5 = 200
 - \bigcirc (10 x 6) x 8 = 60 x 8 = 480

 - \bigcirc 10 x (6 x 9) = 10 x 54 = 540
 - 5 x (2 x 10) = 5 x 20 = 100
 - 6 8 x (10 x 10) = 8 x 100 = 800
- 2 a 7 . 2
- 6 9 . 7
- **@** 2 , 8
- **1** 7 , 10
- 20 . 12
- 6 2 . 8
- 22 . 35
- 18 . 25
- **3 a** 100
- **(b)** 400
- **©** 50

- **100**
- **6** 5
- 4,000

- 9 50
- 2
- 0 600

- 0 20,000
- 40,000
- 000,000
- 4 a 6 x (2 x 10) = (6 x 2) x 10 = 12 x 10 = 120
 - \bigcirc 9 x (2 x 100) = (9 x 2) x 100 = 18 x 100 = 1,800

 \bigcirc 2 x 80 = 2 x (8 x 10) = (2 x 8) x 10 = 16 x 10

$$= 160$$

 \bigcirc 3 x 50 = 3 x (5 x 10) = (3 x 5) x 10 = 15 x 10

 \bigcirc 9 x 500 = 9 x (5 x 100) = (9 x 5) x 100

$$= 45 \times 100 = 4,500$$

 $98 \times 2,000 = 8 \times (2 \times 1,000) = (8 \times 2) \times 1,000$

 \bigcirc 3 x 70 = 3 x (7 x 10) = (3 x 7) x 10 = 21 x 10

- \bigcirc 9 x 80 = 9 x (8 x 10) = (9 x 8) x 10 = 72 x 10
 - = 720

- \bigcirc 6 x 300 = 6 x (3 x 100) = (6 x 3) x 100 = 18 x 100 = 1,800
- $= 56 \times 100 = 5,600$
- 0 9 x 3,000 = 9 x (3 x 1,000) = (9 x 3) x 1,000 $= 27 \times 1,000 = 27,000$
- \bigcirc 3 x 2,000 = 3 x (2 x 1,000) = (3 x 2) x 1,000 $= 6 \times 1,000 = 6,000$
- **6 a** 10
- **100**

G 4

- **6**
- 50
- **1** 300
- 12
- **1** 32
- 1 40 , 240
- **120** 20 120
- (3 120 x 10 = 1.200
- 02,9,54
- 008,4,320
- 20 , 30 , 600

a 7

- 16
- **©** 25
- **100**
- 900
- **1**6
- 100
- **6** 5
- (a) >
- **(**) =
- **(**) >

- **(1)** =
- (a) <</p>
- **(1)** <

- (2) <</p>
- 6
- 0 =

- **()** =
- (3) <</p> (e)
- 0 > (a)

- (b)

- 4 (c)
- (d)
- **9** $3 \times 4 \times 3 = (3 \times 4) \times 3 = 12 \times 3 = 36$ pens.
- $4 \times 4 \times 2 = 4 \times (4 \times 2) = 4 \times 8 = 32$ books.
- 0 5 x 4 x 3 = (5 x 4) x 3 = 20 x 3 = 60 bottles.
- 10 x 5 x 8 = 10 X (5 x 8) = 10 x 40 = 400 books.

Worksheet

- 1 @ 100
- 330,003,000
- 1,000
- **1**0
- **3** 5
- 2 @ 2 x 5
- 200
- 900.000.00
- **d** 800,603,402
- 3 . 10 . 24 . 240

- 3 405,000,002 4 405,200,000 4 450,000,002 4 450,200,000
- $4 = (3 \times 3) \times 3 = 9 \times 3 = 27$
 - \bigcirc (4 x 4) x 3 = 16 x 3 = 48

Exercises on

Unit 6

Lessons (13)



- 10 0 1 , 2 , 5 , 10
 - 6 1 . 2 . 3 . 4 . 6 . 12
 - **©** 1 , 3 , 5 , 15
 - 6 1 , 2 , 3 , 6 , 9 , 18
 - 6 1 , 2 , 4 , 5 , 10 , 20
 - 11.2.3.4.6.8.12.24
 - 91,2,3,4,6,9,12,18,36
 - 1 1 , 2 , 4 , 5 , 8 , 10 , 20 , 40
 - 1 . 17
 - 1 1 , 3 , 5 , 9 , 15 , 45
- 2 a 1 . 13
 - **1** 1 , 2 , 3 , 4 , 5 , 6 , 10 , 12 , 15 , 20 , 30 , 60
 - **©** 1 , 2 , 4 , 7 , 14 , 28
 - 1 . 2 . 7 . 14

 - 1 1 , 2 , 4 , 8 , 16 , 32
- Answer by yourself.
- 0

Number	Factors of the Number	Prime Number or Not
6	1,2,3,6	Not a prime number
19	1.19	a prime number
22	1,2,11,22	Not a prime number
31	1 ، 31	a prime number
14	1,2,7,14	Not a prime number

30	1,2,3,5,6,10,15,30	Not a prime number
25	1,5,25	Not a prime number
23	1 . 23	a prime number
11	1.11	a prime number

6

		The Fact	tors of the	Number	
Number	2	3	6	9	5
8	1	Х	Х	Х	Х
9	Х	1	Х	1	Х
25	Х	Х	Х	Х	1
12	1	1	1	Х	Х
15	Х	1	Х	Х	1
10	✓	Х	Х	Х	1
18	✓	1	1	1	Х
27	X	1	Х	1	Х
28	✓	×	Х	Х	Х
32	✓	Х	Х	Х	Х
30	✓	1	1	Х	1
36	✓	1	1	1	Х
45	Х	1	X	1	1
60	1	1	1	Х	1
90	1	1	1	1	1

- 6 2 , 3 , 5 , 7
- **(b)** 11 , 13 , 17 , 19
- 23 , 29
- 31 , 37
- 6 41 , 43 , 47
- **6** 53 , 59
- 61 67
- **1** 71 , 73 , 79
- 1 83 , 89
- **97**
- **7 a** 37
- 24
- 21

- 31 **9** 2
- 6 59 **a** 3
- **1** 2

1 odd 2

- one factor.
- nore than two factors.
- 9 2 17
- **6** 1
- 2

- 3
- **a** 2
- two factors.

- g prime.
- ne factor.
- nore than two factors.

- two factors.
- 4
- **1** 5

- **@** 20
- n odd

Worksheet

- 1 @ 6,217
- 4.619
- 9 40,000
- 32 , 3,200
- 2
- **45,040,005**
- Associative.
- **15**
- more than two factors.
- **a** 3
- 6 800.302.005
- 1.000
- **61** 67
- 3
- (a) 1 , 2 , 4 , 5 , 8 , 10 , 20 , 40
 - 1 1 2 4 4 7 14 28

Lesson

- (G.C.F.) = 5
- (G.C.F.) = 6
- \bigcirc (G.C.F.) = 2
- \bigcirc (G.C.F.) = 4
- \bigcirc (G.C F.) = 7
- \bigcirc (G C.F.) = 12
- (G.C.F.) = 16
- \bigcirc (G.C.F.) = 12
- Largest number of groups (G.C.F.) = 7 Number of girls in each group = $28 \div 7 = 4$ girls. Number of boys in each group = $21 \div 7 = 3$ boys.
- Largest number of snacks (G.C.F.) = 8 Number of croissants = $24 \pm 8 = 3$ croissants. Number of sweets = $16 \div 8 = 2$ sweets
- Largest number of flower arrangements (G.C.F.) = 7

Number of red flowers = $21 \div 7 = 3$ flowers.

Number of blue flowers = 14 - 7 = 2 flowers.

Worksheet

- 3
- 45.000
- \bigcirc 30 x 80 = 2.400
- 600,420,320
- 304,050
- 4
- 100

(1) 20

6 50

(G.C.F.) = 15.

4 5 x 20 = 100 minutes.

Lessons

- & ② Answer by yourself.
- 30,6,12,18
- 0 , 20 , 40
- 6 0 , 42 , 84 **6**
- **6** 0 , 12 , 24 , 36 , 48
- 1 0 · 24 · 48
- a 0, 8, 16, 24, 32
 - **(b)** 0, 9, 18, 27, 36
 - **©** 0, 7, 14, 21, 28
 - **6** 6, 12
- **36, 72**
- **1** 40, 80
- **9** 42, 6, 7, 6, 7, 42
- 6 5 x 9, 45, 5, 9, 45
- 1 24, 24, 8,3, 24 1 24
- 30

- **1** 45
- **1** 21
- 0 8 is a multiple of 4 and 2.

or 2 and 4 are factors of 8.

10 is a multiple of 2 and 5.

or 2 and 5 are factors of 10.

- 60 , 72 , 84
- **10 a** 2
- **1**6
- 12

- 24
- @ multiple.
- **1** 21

- 24
- 20
- **1**5

0

Worksheet

- 9 8,000,080
- 4
- Millimeter.
- **d** 400
- (a) 4 milliards (billions).
- 2 @ Millions.
- **(b)** 100,000 **(c)** 46,000

- **6** 5
- 24
- Common multiples: 0 , 12 , 24
- 10:00-8:45=1:15.

Exercises on

Unit 7

Lesson

- **105**
- 70 78
- 126

- 130
- 172

- **9** 162
- **2 a** 492
- 228
- **6** 504

- **@** 644
- **152**
- **135**
- **9** 171
- 891
- 180

1 276

3 110

- 522
- **6** 510

Worksheet

- 1 2 9,999,998
- **(** 3
- 10

d 48

6

- 10
- - 6,542
- 5,000 **1** 8 X 1,000,000 + 5 X 10,000 + 6 X 100 + 7 X 1
- 4 times.
- 3 (a) 26 X 5 = 100 + 30 = 130
 - 69 X 3 = 180 + 27 = 207
- 4 (2) 623
- 448

Lesson

- 1 3 8 .9
- 6 3.4
- **3**,6,5
- **(**1) (6 X 3) + (6 X 4) + (6 X 5)
- (a) (b) X 200) + (b) X 90) + (c) X 3)
- $(8 + 9 + 3) = (6 \times 8) + (6 \times 9) + (6 \times 3)$
- 9 2 X (700 + 30 + 9)
- 2 a 124
- 414
- 2,910

- **1** 2,208 9 29,358
- 2,492 **1** 27,244
- 7,692 18,360

- 0 24,015
- (3) (a) 1,000
- 3.072 11.825
- **6** 5,661 7,698

- **d** 4.942 16.398
- 14.035
- 4 1280 X 3 = 3,840
- 525 X 7 = 3,675
- 6 930 X 5 = 4,650
- 185 X 8 = 1,480

Worksheet P

- 36 1 a n = 3 X 8
 - 3,030,000,300
- **©** Commutative **©** 5,000
- 2 @ 36
- **6** 500
- **6** 5
- 9:40
- 3 @ 864
- **(b)** 1960
- 45.512

Lessons 3,445

- **1 a** 4
- **564**
- 9,532

4,500

- 6,483
- 9,050
- 6,600

- 4003
- 0.700 + 80 + 5
- 0900 + 20 + 7
- \bigcirc 7,000 + 800 + 50 + 9
- 0.6,000 + 200 + 1
- 00300 + 9
- 09,000 + 6
- 8,000 + 200
- 2 3,000 + 10
- **2 a** 1,356
- 2,900
- **1,308**

(i) 7,488

3 280

- **3,762**
- **6** 55,368

- 8,724
- **6** 36,168 345
- 159

- **1,664**
- 5.010
- 1,195

- 10,472
- 13,188
- 10,984

- 1,218
- 3,621
- 12,032

- **4 135** , 150
- **1** 702 , 720
- **2,136** , 2,400
- **1** 27,248 , 24,000
- **2** 40,070 , 40,000
- **(3)** (3) >
- **(**) =
- **(**) <

- **(1)** =
- (a) >
- **⊕** <

- (3)
- **(i)** <
- **n** =
- 135 X 6 = 810 pounds.
- 6,250 X 8 = 50,000 pounds.
- 3 24 X 7 = 168 hours.

Worksheet

10

2 6

3 (1)>

- **473**
- **G** 4

17

- **6** 5,023
- 16
- - 40
- Thousands
- 2,50,400
- =
- **G** =

- (a) >

- **4** 54,005,000 , 54,000,500 , 45,500,000 , 45,000,050
- 5. 64 X 8 = 512 seats.

Lesson

- **1 a** 2,132
- **5** 750
- 2,280

- 3,420
- 5,760
 - **(b)** 2,100
- 1,480 960

3.400

9 1,000

2 a 7,470

3 a 1.350

- 680 5.160

 - 1.360 **2,970**
- **2,320** 4,400

3,780

5.700

- 3,780
- **1,120** 4,400
 - 3,600
- **1** 2,880
- 95 X 20 = 1,900 plasters.
- 6 20 X 35 = 700 kilograms.
- 65 X 20 = 1,300 pounds.

Worksheet

- 1 31
- **5** 70
- 120

© 5,000

- O Distributive
- 2 @ 59
- **86,000 1**, 3, 7, 21
- **6** 8
- 6,030,403
 - **55,513** 3128
- 3 @ 61,100 **1,350**
- **4** 20 X 18 = 360 apartments

Lessons 78/8

- 1,620
- **3** 2,553 9 5.092
- **2 3** 864
 - **3,237**
- 3 a 1,820
- **6** 468
- **2,548**

1,820

4,275

2.448

3,312

- **3,627** 2,484
- **(b)** 1.190
- 3,024 1,512

1,708

2,047

1,152

3,900

2,325

- **4 a** 3,686 16 X 95 = 1,520 piasters.
- 6 55 X 45 = 2,475 pounds.
- 12 X 45 = 540 pounds.

Worksheet

- 350,000,350
- **(**) =
- 986,310

- @ 34 X 25
- 6
- 2 3
- 0 .6 .12 .18
- Millions
- 22
- 9,005,006,002
- 3.400
- 080,1
- **©** 3,7432

- **60 81,000**
- 24 X 30 = 720 hours.

Lesson



- 56 X 6 = 336 pounds, 24 X 3 = 72 pounds 336 + 72 = 408 pounds.
- 98 X 12 = 1,176 pounds, 80 X 10 = 800 pounds. 1.176 + 800 = 1.976 pounds.
- 300 55 = 245 km, 240 + 300 + 245 = 785 km.
- 65 X 3 = 195 seedlings , 55 X 2 = 110 seedlings 195 + 110 = 305 seedlings.
- 27 X 62 = 1674 accidents, 1674 X 7 = 11718 accidents.
- 6 27 X 7 = 189 pages, 62 X 7 = 434 pages. 198 + 434 = 623 pages.
- 65 + 55 = 120 tickets, 500 120 = 380 tickets.
- 126 X 3 = 378 km, 378 + 12 = 390 km.
- 96 X 12 = 1,152 stickers, 1,152 300 = 852 stickers.
- 60 X 24 = 1,440 minutes, 1,440 X 7 = 10,080 minutes

Worksheet



- 3 5.596
- **©** 0

- **1** 72
- 3 gm
- **2 3** 50
- 00,000
- G 45 = 9a

- 12 3 @ 2,075
- **386**

2,880

- 912

- **6** 40,500
- 4 12 X 3 = 36 pounds, 25 X 7 = 175 pounds. 36 + 175 = 211 pounds.

Lessons (III)



- **6** 9, 2, 4, 1
- **©** 15.5.3.0
- 28,4,7,0
- **36,6,6,0**
- **1** 35,8,4,3
- 9 25,4,6,1 1 42.8.5.2
- **1**, 5, 6, 1 0,8,6,8,0
- 2

	Equation	Related Fact	Quotient
a	400 ÷ 4	4 ÷ 4 = 1	100
0	8,000 ÷ 2	8 ÷ 2 = 4	4,000
0	90,000 ÷ 3	9 ÷ 3 = 3	30,000
0	420 ÷ 7	42 ÷ 7 = 6	60
(350 ÷ 5	35 ÷ 5 = 7	70
•	3,600 - 4	36 - 4 = 9	900
9	27,000 ÷ 9	27 ÷ 9 = 3	3,000
0	240,000 ÷ 8	24 - 8 = 3	30,000
0	60,000 ÷ 3	6 ÷ 3 = 2	20,000
•	18,000 ÷ 6	18 - 6 = 3	3,000

- 30
- 000,8
- 300

- **(1)** 3,000
- 90
- 000,08

- 360
- 00.000
- 400

- 0 700,000
- 4 a >
- 0 > (a) >
- (a) >

- **(i)** = (2) >
- **(**) <
- **(**) <

- **(1)** <
- 40

- 6 800
- 7,000
- 5.000
- 20.000 6 15 ÷ 4 = 3 R 3
- 21 ÷ 5 = 4 R 1
- (B) (a) $32 \div 9 = 3 R5$ (b) $32 \div 3 = 10 R2$

 - 32 ÷ 4 = 8 R 0
 ⑥ 32 ÷ 7 = 4 R 4
- \bigcirc 52 ÷ 6 = 8 R 4 , 9 boxes are needed
- $12,000 \div 3 = 4,000$ pounds.
- 11) 24,000 ÷ 6 = 4,000 pounds.

Worksheet

- 1 300
- 6
- 8

- 6 8,045
- 50
- 4,000 + 200 + 50 + 6
- **©** 1,2,4,7,14,28

- **1** 2
- 4.000
- 3 @ 45,6,7,3
- **(b)** 32,8,4,0 **(c)** 14,2,7,0
- **1** 23.5.4.3
- 68,8,8,4
- 4 $240 \div 8 = 30$ students.

Lesson

- 14
- **1**6
- **6** 49

- 18 R 2
- 12 R 4 **146**
- 13 R 3 123

- (9) 146 R 3 008
- 90
- 2 a 14 R 5
- 109
- **3** 23

123

Worksheet

- 1 0 0
- 3
- 9.876.534

- 4,015
- 20
- 2 (2) 1,2,4,8,16
- Millions
- **9**
- **3**0
- **9,025,003**

- 3 @ 19
- 24
- 4 $85 \div 5 = 17$ candy bars.

Lesson 18

- **1**3
- **18**
- **11 R4**

- **156**
- 144 R 1
- **1** 275

- 1.614
- **1** 717
- 1.358 R2

- **1** 507 2 a 92 ÷ 4
- 701 R 3
 () 53 ÷ 3
- 1,201 © 1,058 ÷ 6

- **688 ÷ 5**
- 2,802 ÷ 6
- $96 \div 8 = 12 \text{ m}.$
- 4 1,548 ÷ 6 = 258
- $175 \div 5 = 35$ tourists.

Worksheet |

- 1 0 50,000
- (b) >
- 9

- millimeter 2 @ 20
- **1,000** 44
- **3**

- **(1)** 6
- 26
- 3 @ 18
- **6** 49
- **6** 590 R 2
- 4 72 ÷ 6 = 12 students

Lessons 14a15

- 1 and 40 and 40 and 40.
 - 60 and 90 . 20 and 30.
 - © 120 and 160 . 30 and 40.
 - @ 100 and 150 , 20 and 30.
 - @ 300 and 600 , 100 and 200.
 - 100 and 1,400 , 100 and 200.
 - 2400 and 3,000 , 400 and 500.
 - 1 3200 and 4,000 , 400 and 500.
 - 1,000 and 10,000 , 1,000 and 2,000
 - **1** 6,000 and 9,000 , 2,000 and 3,000.
- **2 3** 13
- 16
- 23 R2

- 34
- 75
- 1 49 R3

- 9 138
- **1** 248 248 R 4
- 136 R2 **1** 805

- **157 4878**
- **1** 709
- 3008
- 3 a 17 , 10 and 20 , 2 , 17.
 - 27 , 20 and 30 , 2 , 27.
 - © 124, 100 and 200, 3, 124
 - @ 714 , 700 and 800 , 3 , 714
 - (a) 3,275 R 2 , 3,000 and 4,000 , 4 , 3,275 R 2.
- \bigcirc 784 ÷ 7 = 112 passengers.
- 144 + 216 = 360 . 360 ÷ 8 = 45 students.

Worksheet



- 1 (0,000 **110**
- **(**) > **9** 5
- 000,1

2 @ 20 23

3 a 23

- 27
 - 65
- 68
- 1,213

7.089

4 215 ÷ 5 = 43 rooms.

Lesson 16

- 0 3 X 12 = 36 pencils.
- 4 X 28 = 112 pencils.
- 112 + 36 = 148 pencils. , $148 \div 4 = 73$ pencils.
- 135 + 195 = 330 pages. , 500 330 = 170 pages.
- 3 X 376 = 1,128 pages.

- 4 19 + 27 + 155 = 199 cones.
- 8 X 1,421 = 11,368 tourists.
- **6** $7 \times 9 = 63$, $5 \times 10 = 50$, 63 + 50 = 113
- 682 + 117 = 799 gems , 799 45 = 754 gems. 754 + 130 = 884 gems.
- , 2 X 22 = 44 LE. 1 2 X 14 = 28 LE. 28 + 44 = 72 LE. 4 X 72 = 288 LE.
- $9 352 \div 8 = 44 \text{ toys}.$
- 164 + 20 = 184 persons., $184 \div 8 = 23 \text{ persons.}$

Worksheet III

- **1 a** 24,000
- (i) =
- **©** 3,000,030,300 **①** 11
- **6**

- 2 17
- 26.000
- **©** 100,000

- 6,270
- 26,26
- 3 60.600
- 66.214
- 928

- **178**
- **4** 523,205 , 352,250 , 352,025 , 253,520
- 5 5 X 81 = 405 girls. . 405 + 81 = 486 students. $486 \div 9 = 54$ students.

Exercises on

Unita

- **1 a** 27
- 36
- **G** 0

- **3** 5
- **6** 5
- 10

- 9 10
- (D) 22
- 10

- 23
- 90
- 0 240

- **a** 3
- **1**
- 0 10

- **1** 4
- 2

- 48
- 0 40
- **30**

- **2 a** 47
- 50
- **©** 27

- **a** 23 3
- 25 **(1)** 4
- 12 11

- 12
- **(3)** 11
- 0 30

- **1**
- 0 1
- **O** 7

- 13
- 3 a 23
- **6** 8
- C 180

② 2

a 34



- = 5, = 3, = 4



- \bigcirc = 3, \bigcirc = 4, \triangle = 6
- =7, =3, =8

- **a** 240 **a** = 2, **a** = 5, **b** = 3
- 32 \Rightarrow = 10, \Rightarrow = 6, \Rightarrow = 8
- - 10, = 2, = 6
- **1** 32
- = 4, = 5, = 6
- **6 a** 51
- 28 **8 (9)**
- G 11 6

16

6 52

39 9 1

6 a 86

- **(1)** 3
- **6** 9
- **3** 21 9 18
- 10
- **a** 3
- (a) 194 50 = 144 persons, $144 \div 9 = 16$ microbuses.
 - 18 X 6 = 108 balloons , 108 ÷ 8 = 13 R 4 balloons.
 - 8 X 6 = 48 eggs , 48 38 = 10 eggs.
 - $612 + 28 + 40 = 80 \text{ m}, 80 \div 4 = 20 \text{ m}$

 - \bigcirc 42 ÷ 3 = 14 , 14 4 = 10 biscuits.
 - **Model (A):** 15 X 48 = 720 nails,
 - 15 X 24 = 360 metal rings,
 - $15 \times 21 = 315$ pieces of wood.
 - Model (B): 7 X 52 = 364 nails, 7 X 32 = 224 metal rings,
 - $7 \times 26 = 182$ pieces of wood. Total: 720 + 364 = 1,084 nails,
 - 360 + 224 = 584 metal rings
 - 315 + 182 = 497 pieces of wood.

Correcting Typos

Exercises Book 4th Primary First Term

Page Number	Question Number	Wrong	Correction
14	5-е	Ones	Thousands
22	5	Expanded Form	Standard Form
25	7-b	Eight hundred seventy million, fifty thousand, three hundred two.	Eight hundred seven million, fifty thousand, three hundred two.
27	3-4	Three hundred thirty.	Three hundred thousand thirty.
	3-5	(3 X 100,000) + (3 X 1,000)	(3 X 100,000) + (3 X 10,000)
	3-(a)	Three hundred thousand three hundred.	Three hundred million three hundred.
31	8-a	ninety	nine
42	1-C	1,000	100
45	3-C	0 245	0 + 245
	3-j	100 + 250 = 350	100 + 150 = 250
84	2-C	Centimeters – millimeters	Centiliters – millilitres
87	7	6	600
99	4	X X X X S S S S S S S S S S S S S S S S	X X X X X 105 120 135 150
104	1	Solve each problem	Find the perimeter
119	3	4 cm 4 cm 4 cm 8 cm	3 m 8 m
120	4	width and length	Side length

Page Number	Question Number	Wrong	Correction
142	4-b	4 X 100	4 X 1,000
144	1-d	8 + m = 48 , 8m = 48	6 + m = 48 , 6m = 48
147	4-g	16 X 100	16 X 1,000
183	4	7 X 80 = 56 7 X 9 = 63	8 X 80 = 640 8 X 9 = 72
184	2-a	(3 X 3)	(3 X 2)
	2-b	4 X 4	4 X 5
185	2-d	639	936

Correcting Typos Main Book 4th Primary First Term

Page Number	Question Number	Wrong	Correction
45	1-b	42-58	58-42
141	1-d	6	9
199	2-d	+ x = 18	+ + = 18